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THE
INVERTEBRATE FAUNA
OF
NOTTINGHAMSHIRE.

THE
INVERTEBRATE FAUNA
OF
NOTTINGHAMSHIRE.

BY

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NOTTINGHAM:

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PREFACE.

THE origin of this work calls for some explanation. In 1902 the Nottingham Naturalists' Society completed the fiftieth year of its existence, and to mark this event the Society resolved to collect information on all branches of the Natural History of the county and to publish this information in a special volume or volumes as soon as the material collected was sufficient for the purpose. To provide for the cost of publication a "Jubilee Fund" was formed by voluntary contributions from members of the Society, and the task of collecting and arranging the records was entrusted to me. My own interests at the time were chiefly botanical, and I had already amassed considerable material for a *Flora* of the county, but the Invertebrate Zoology had been little investigated and seemed to call for preferential treatment. Systematic field work was accordingly taken up with vigour, and each succeeding year saw large additions made to our knowledge of the local fauna, but the field is large and the workers were few, and progress therefore was not so rapid as could have been desired. By the autumn of 1914, however, the material accumulated was considered sufficient to warrant publication, in spite of its very obvious incompleteness, and the present volume is the result. It does not pretend to be more than a contribution towards a fuller knowledge of the Invertebrate animals of the county, but it will at any rate be of use in showing what has been accomplished and how much still remains to be done.

A book of this kind can only be produced by the co-operation of many workers, and in its preparation I have received efficient help from two classes of workers:—(1) those who have contributed specimens, or notes of specimens, collected in the county, and (2) specialists in the various groups who have examined and identified the specimens. And here it may be claimed that, however incomplete the work may be, it has at least the merit of accuracy so essential in all faunistic work, for practically every species recorded has been submitted to and

named by a leading authority in the group to which it belongs. It is hoped that the assistance received in both these ways has been acknowledged in the text, but particular mention must be made here of my great indebtedness to the Rev. Alfred Thornley, M.A., who has not only placed his own large collections of specimens and records at my disposal, but has devoted much time for many years past to the examination and identification of local insects of all orders collected by other workers. Without his aid the work could not have appeared without further and considerable delay.

It is earnestly hoped that the publication of this book may stimulate others to take up the study of our local fauna, and especially of those groups which have, so far, been neglected. The gaps in our knowledge may thus be filled in during the next few years, and sufficient matter collected for the preparation of a supplement to the present work. In the meantime much attention is being paid to the Vertebrate fauna and also to the flora of the county, with a view to the future publication of further volumes on the Natural History of Nottinghamshire.

ERRATA.

Page 2, line 16. For *two* read *five*. (Only two are English, the rest occurring in the west of Ireland and Scotland).

Page 84. **COREIDAE** should be *COREIDAE*.
BERYTIDAE should be *BERYTIDAE*.

Page 140. The Family name *PIERIDAE* should have been placed *above* the paragraph relating to *Aporia crataegi*.

Page 195. *ACIDALIINAE* should be *ACIDALIINAE*.

Page 197. For *HYDRIOMENIDAE* read *HYDRIOMENINAE*.

Page 223. *CRAMBINAE* should be *CRAMBINAE*.

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EXPLANATORY NOTE.

The type used in the systematic part of the work for the groups or divisions of the Animal Kingdom is as follows, in descending order of magnitude.

PHYLUM

CLASS

SUB-CLASS

ORDER

SUB-ORDER

SERIES (used for Hemiptera,
Diptera and Hymenoptera).

DIVISION (used in Hymenoptera only).

FAMILY

SUB-FAMILY

GENUS

Species

AUTHORITIES FOR THE RECORDS.—The name in italics and enclosed in brackets following a locality is that of the person to whom the record is due; when several localities are recorded by the same collector they are separated from each other by semicolons (;) and the whole series followed by his name. When a locality, or series of localities separated by semicolons, is followed by a full stop without any authority being given, the record is my own (except in the case of the Oligochaeta, where the records, unless otherwise stated, are all by the Rev. H. Friend).

Signs used are:—♂ = male, ♂ ♂ = males.

♀ = female, ♀ ♀ = females.

THE INVERTEBRATE FAUNA OF NOTTINGHAMSHIRE.

PORIFERA (SPONGES).

THE animal kingdom is divisible into two great subdivisions, the PROTOZOA or unicellular animals, in which the body consists of a single *cell* usually of microscopic dimensions, which is nevertheless capable of performing all the varied functions of life ; and the METAZOA or multicellular forms, whose body consists of a variable but usually immense number of constituent cells showing differentiation in form and function. All the Metazoa, however, commence life in a unicellular condition, since they each originate in a single cell, the fertilized egg, from which by continued cell-division and differentiation the mass of cells and tissues constituting the body of the organism is built up. The lowest group of the Metazoa is the PORIFERA, a somewhat plant-like group of aquatic animals which, with the exception of one small family, are exclusively marine, occurring abundantly in almost all parts of the ocean from the equator to the poles, and at all depths. They are stationary organisms, fixed to some object in the water, and in the simplest and most primitive forms are more or less cup-shaped or cylindrical, but may form tufts by budding, and very commonly attain a great complexity of structure by repeated branching or folding. In size they range from individuals scarcely visible to the naked eye to complex regular or irregular masses several feet in circumference.

The name of the group was suggested by the fact that the side-walls of the cup or cylinder, or of each branch in a compound individual, are perforated by a number of pores or canals which lead into a central chamber or cavity, this again opening to the exterior by a larger opening, the 'osculum.' Through the system of canals there flows a continual stream of water, which enters by the inhalent pores and passes out through the oscula :

it brings with it the minute particles of organic matter upon which the animal feeds, and the oxygen necessary for respiration: it also carries away effete matter.

The wall of the body is composed of two layers of cells, between which is a layer of gelatinous consistency; in this middle layer is a skeletal or supporting framework consisting in some cases of a close network of horny fibres with or without minute needles or spicules of a siliceous or opaline character, in other cases of siliceous spicules only, and in still others of spicules composed of carbonate of lime. These spicules, on account of their remarkable diversity of form, combined with their exquisite symmetry and complexity of structure, are among the most beautiful microscopic objects in the organic world.

In the familiar bath sponges spicules are altogether absent, and the skeleton is entirely horny.

Two species of freshwater sponges occur in the British Isles, but only the following has, so far, been detected in Notts. It is a sessile, incrusting, massive or irregularly lobed form of a yellowish-brown or dull green colour, varying in size from less than an inch across to masses a foot or more in diameter, and is often common in rivers and canals attached to submerged timber or floating logs:—

EPHYDATIA Lamx.

E. fluviatilis Johnst. Wollaton canal near Nottingham.

COELENTERATA.

THESE are radially symmetrical animals with a two-layered body wall enclosing a single cavity and having a single terminal opening. The phylum embraces four classes, only the first, however, containing any non-marine forms.

- Class I. HYDROZOA : Freshwater Polyyps, Zoophytes, many small Jelly-fishes, and a few Corals.
- „ II. SCYPHOZOA : The larger Jelly-fishes.
- „ III. ANTHOZOA : Sea Anemones and Corals.
- „ IV. CTENOPHORA.

HYDROZOA.

This group includes the Freshwater Polyyps, Zoophytes, many of the smaller Jelly-fishes, and a few of the Corals. They are all aquatic and mostly marine, but there are a few freshwater forms among which the common Hydra of our ponds and ditches is a familiar example. Still more familiar objects are the horny seaweed-like zoophytes or hydroids so abundant on every sea-shore.

The body of a Hydrozoon consists essentially of a simple sac, or tube closed at the base, whose wall is composed of two layers of cells separated by a gelatinous intermediate substance ; this surrounds a central digestive cavity which communicates with the exterior by a terminal aperture, the mouth, around which are radially arranged a number of arms or tentacles. Some of the cells of the outer layer are modified into dart cells, or stinging cells, by means of which the animal paralyses and captures its living prey.

Only a very few of the Hydrozoa retain this simple condition in the adult state. A large number are colonial, the individual polyyps or 'zooids' being connected together by tubular stalks to form arborescent colonies with the branches of the tree-like growth arranged in a definite and regular manner. Usually the colony develops a common external covering or skeleton, which takes the form of a delicate tube of a horny material investing all the branches of the colony, and expanding at the end of each branch into a little vase or cup occupied by a zooid.

In many Hydrozoa two distinct types of individual occur : (1) the fixed branching colony of polyyps which is nutritive and non-sexual ; this increases in size by budding off new zooids, and

eventually produces lateral buds which develop into (2) small bell-shaped medusae or jelly-fishes which break off and swim away from the parent colony and develop the sexual reproductive cells. There is thus in the life-history an alternation of the non-sexual nutritive zoophyte or hydroid generation and the sexually reproductive medusoid generation. In some Hydrozoa the hydroid stage is predominant and the medusoid stage degenerate or absent, while in others the hydroid stage is inconspicuous or absent and the medusoid predominant.

Hydra differs from most of the other Hydrozoa in being non-colonial, the young polyps produced by budding becoming detached from the parent and constituting new individuals. Sometimes, however, the buds remain attached until they have themselves formed buds, and so a small temporary colony may be formed. Sexual organs are developed in the outer layer of the body wall, and there is no trace of a medusoid stage.

Cordylophora is a branched colonial hydroid in which the sexual reproductive individuals are not set free from the colony as medusae, but remain attached to it in a rudimentary condition, being indeed merely oval capsules containing the reproductive organs. It occurs on submerged timber, such as lock-gates and the piles of piers, or on the brick or stone work of canals.

The following species of freshwater Hydrozoa are recorded by the Microscopical Section of the Nottingham Naturalists' Society in the *Transactions* for 1896-7:—

HYDRA Linn.

- H. viridis** L. In ditches at Attenborough and Beeston; pond at Gamston bridge near Nottingham; pond at Lambley.
- H. vulgaris** Pall. (= *H. grisea* L.) Beeston canal; ditches between Attenborough and Beeston; Colwick Park lake; pond at Lambley; ponds by the Trent opposite Hoveringham.
- H. oligactis** Pall. (= *H. fusca* L.) Wollaton and Grantham canals near Nottingham; Colwick Park lake; Beeston canal; ditches between Beeston and Attenborough; pond at Gamston bridge; ponds by the Trent opposite Hoveringham.

CORDYLOPHORA Allman.

- C. lacustris** Allm. Overflow from Wollaton canal between Ilkeston Road and the Saw-mills.

PLATYHELMINTHES (FLAT WORMS.)

THE members of this Phylum are flattened, bilaterally symmetrical animals, with soft, usually unsegmented bodies. In these, as in all animals of higher organization than the Coelenterata, the body is built up of three cellular layers, the middle one preponderating in bulk. There is no body-cavity, the space between the skin and the alimentary canal being filled up with tissue belonging to the middle layer. There is a peculiar excretory vascular system, but no blood-vascular system.

The TURBELLARIAN worms are small aquatic creatures with flattened, often leaf-like, bodies, generally only a few millimetres in length, but occasionally larger, with a ciliated epidermis which enables them to swim in water or crawl with a slug-like motion over the mud. They are both freshwater and marine, and there are some terrestrial species.

The TREMATODA are parasitic, usually leaf-like forms devoid of cilia, and provided with suckers by which they fix themselves to their hosts. The best known example is the Liver-Fluke (*Fasciola hepatica*) which, in its earlier or larval stage, lives in the body of a water snail (*Limnaea truncatula*). On the completion of the larval stage it leaves the snail and attaches itself to a stem or blade of grass, and if swallowed by a grazing sheep attains maturity in the liver of the new host.

The CESTODA or Tape-worms are all internal parasites without cilia and without digestive cavity. They have a rounded head bearing suckers and hooks for attachment to the walls of the alimentary canal of the host. The body is long, flattened, and ribbon-like, consisting of numerous similar divisions or segments which become separately detached when mature, and are each capable of reproducing the species. The common Tape-worm (*Taenia solium*), parasitic in the human intestine, passes its early stages in the flesh of the pig, and again infects man if insufficiently cooked pork is eaten.

Nothing is known in Nottinghamshire of the free-living Turbellarians, which offer a wide and interesting field for research. It is to be hoped that some local naturalist will take up the study of these animals, which are obviously of much greater importance for faunistic purposes than the parasitic worms whose life history is so intimately bound up with that of their hosts.

NEMATHELMINTHES.

THESE animals, commonly known as Round or Thread-worms, have an elongated, cylindrical, unsegmented body, containing a body-cavity. Many are internal parasites, e.g., *Ascaris lumbricoides*, a common parasite in the human intestine; but others are free-living, inhabiting fresh or salt water, damp soil, or decaying organic matter. Some Nematodes are parasitic in plants, and often cause considerable damage to corn and root crops, etc. *Gordius* occurs in fresh water and damp earth, and has frequently been found in the county.

ROTIFERA.

THE Rotifers or Wheel Animalcules are bilaterally symmetrical animals of microscopic size found abundantly in ponds, streams, ditches, etc.; some forms are marine, and a few are parasitic. They vary greatly in shape, being spherical, ovoid, conical, elongated, flattened, etc. Although of minute size they have a spacious body-cavity, an alimentary canal, and well-developed excretory and nervous systems. At the front end of the body is a 'trochal disc' covered with cilia which, by their lashing movements, produce the appearance of a rotating wheel. By means of these movements the organism swims about in the water—when not fixed by the foot—and also obtains food. The posterior end of the body is tapering, and is called the foot: this is often jointed and telescopic, and may end in a sucker-like disc by means of which the organism adheres to some object in the water, or it may terminate in two or more processes which can be used as prehensile organs for anchoring the body to water-weeds, etc. The fixed forms usually secrete gelatinous tubes in which they live. In some forms, e.g., *Meliceria*, the tube is built up of pellets of foreign or faecal matter.

During the summer the Rotifers produce thin-shelled 'summer eggs,' which develop without fertilization. These parthenogenetic eggs are of two kinds, large and small: the former develop into females, the latter into males. In the autumn thick-shelled 'winter eggs' or 'resting eggs' are produced which last over the winter, and are probably fertilized: in the spring they develop into females.

The duration of life in the Rotifers is short, most of them living only a few days.

Very little is known of the Nottinghamshire Rotifers, and the group badly needs working out. The following twenty-two

species, found in various localities about Nottingham in canals and ponds, are recorded in the *Transactions of the Nottingham Naturalists' Society*, on the authority of Mr. W. H. Pratt:—

- Floscularia cornuta* Dobie.
- „ *campanulata* Dobie.
- „ *ornata* Ehr.
- Stephanoceros eichornii* Ehr.
- Melicerta ringens* Schrk.
- Limnias ceratophylli* Schrk.
- Æcistes crystallinus* Ehr.
- Philodina megalotrocha* Ehr.
- Conochilus volvox* Ehr.
- Rotifer vulgaris* Schrk.
- Actinurus neptunius* Ehr.
- Asplanchna brightwellii* Gosse.
- Synchaeta tremula* Ehr.
- „ *pectinata* Ehr.
- Gosphora aurita* Ehr.
- Mastigocerca carinata* Ehr.
- Dinocharis tetractis* Ehr.
- Euchlanis triquetra* Ehr.
- „ *dilatata* Ehr.
- Salpina* sp.
- Pterodina patina* Ehr.
- Brachionus pala* Ehr.

ANNELIDA.

THE Annelids are worms with an elongated body, divided up into a series of rings or segments both externally and internally, and with bundles of chitinous spines or *chaetae* embedded in the side walls of the body.

The principal divisions of the Phylum Annelida are the following:—

Class I. CHAETOPODA (Bristle Worms).

Order 1. POLYCHAETA.

„ 2. OLIGOCHAETA.

Class II. HIRUDINEA (Leeches).

The *Chaetopoda* are worms whose body consists of a series of nearly similar segments or divisions bearing bundles of conspicuous chaetae or bristles. A well-marked body cavity (*coelome*) is present, and this is divided up into a series of chambers, corresponding to the segments, by thin septa which cross the space between the body wall and the alimentary canal; this is a usually straight tube running the whole length of the body. These worms possess well-developed vascular and nervous systems, and numerous pairs of tubular excretory organs arranged segmentally.

In the Order *Polychaeta* there is usually a well-defined head with eyes and tentacles, and gills or breathing organs are often borne on the segments of the body; the chaetae are numerous and usually spring from muscular processes (*parapodia*) of the body wall; no clitellum or girdle is present.

Most Polychaets are found on the sea-shore, lurking beneath stones or among seaweeds in rock pools, or burrowing in the sand or mud. Many inhabit tubes constructed of agglutinated grains of sand, bits of broken shell, etc.; others secrete calcareous tubes often permanently fixed to rocks, shells, seaweeds, or other objects. The common 'lug-worm' (*Arenicola marina*), familiar to sea-fishermen, whose coiled 'casts' are often excessively abundant on sandy shores, is an example of this group. As practically all the Polychaets are marine they do not concern us further here.

The *Oligochaeta* comprise terrestrial and freshwater forms, including our common earthworms. They have no distinct head, and there are no parapodia, the chaetae—few in number on each segment—simply projecting from the body wall. A

raised girdle or *clitellum* surrounds the body in its anterior part. Some of the freshwater Oligochaeta (*Tubificidae*) manufacture tubes of mud.

The Nottinghamshire Oligochaeta have been fairly well worked out, thanks to the researches of the Rev. Hilderic Friend, to whom our knowledge of their distribution in the county is almost entirely due.

The *Hirudinea* or Leeches possess an elongated segmented body with a sucker at both anterior and posterior ends. The rings which mark the body externally do not correspond to the internal segments, but are more numerous, several going to each segment. The leeches are chiefly inhabitants of fresh water, and live by sucking the blood of other animals; a few are marine, while others are terrestrial; some are parasitic.

British species of *Hirudinea* are not numerous, and none have been certainly identified from our county.

In the following list of Nottinghamshire Oligochaeta all the recorded habitats, unless otherwise stated, are on the authority of the Rev. H. Friend. Full details are given in his papers on "Annelid Hunting in Notts." in the 59th., 60th., and 61st. *Annual Report and Transactions of the Nottingham Naturalists' Society* for 1910-11, 1911-12 and 1912-13. Much good work in this group has also been done by Mr. H. Hillman.

OLIGOCHAETA.

NAIDIDAE.

NAIS Müll.

N. elinguis Müll. Among algae growing on the sluice or overflow from the canal under Nottingham Castle, 15. iv. 1912.

TUBIFICIDAE.

LIMNODRILUS Clap.

L. udekemianus Clap. In runnel at Glapton near Clifton, 13. iii. 1912; river bank at Southwell station, 26. iii. 1912; canal at Nottingham, 15. iv. and 10. ix. 1912. Scarrington, 10. vi. 1913 (*Hillman*).

L. hoffmeisteri Clap. In a ditch on the Ollerton Road near the station at Newark, 13. x. 1911; in mud by canal under Nottingham Castle, 15. iv. and 10. ix. 1912. Scarrington, 10. vi. 1913 (*Hillman*).

- L. papillosus** Friend. With the last at Newark; Gunthorpe, 8. xi. 1911; by the canal at Nottingham, 15. iv. and 10. ix. 1912.
- L. aurantiacus** Friend. In mud by the wide ditch adjoining the canal, Nottingham, 15. iv. 1912. Colwick road, Nottingham, 19. v. 1913 (*Hillman*).

TUBIFEX Lam.

- T. campanulatus** Eisen. Ditch at Newark on the Ollerton road, 13. x. 1911; near canal at Nottingham, 1912.
- T. bonneti** Clap. Newark, with the last; Gunthorpe, 8. xi. 1911; Nottingham, by canal, 1912.
- T. tubifex** O. F. Müll. Gunthorpe, 8. xi. 1911; near canal at Nottingham, 1912.

ILYODRILUS Eisen.

- I. glandulosus** Friend. Ditch on the Ollerton road, Newark, 13. x. 1911: first record for the species, which was described from this material; near canal at Nottingham, 1912.

LUMBRICULIDAE.

LUMBRICULUS Grube.

- L. variegatus** O. F. Müll. Plentiful among pond weeds at Mansfield, 8. v. 1912; ditch at Beeston, 16. xii. 1912.

ENCHYTRAEIDAE.

ACHAETA Vejd.

- A. bohémica** Vejd. By the canal at Nottingham, close to the Midland station, 7. xi. 1911, and 10. ix. 1912. Wells Road, Nottingham, 21. v. 1913; Scarrington, 10. vi. 1913 (*Hillman*).
- A. incisa** Friend. Mansfield, in sandy soil, 8. v. 1912; first record for the species, which was described from this material (see *Trans. Nottm. Nat. Soc.* for 1911-12, p. 58, and *Journ. R. Micros. Soc.*, 1914, p. 133).

HENLEA Mich.

- H. dicksoni** Eisen. In a rubbish heap at Rolleston Junction station, 26. iii. 1912; under mosses and hepatics on brickwork by canal sluice, Nottingham, 16. xii. 1912.

- H. variata** Friend. Described from material found abundantly at Rolleston Junction, 26. iii. 1912; canal at Nottingham, 16. xii. 1912.
- H. attenuata** Friend. Sparingly at Rolleston, and abundant in fine mould at roots of grass by wall of flour mill at Southwell, 26. iii. 1912; in black mould by canal at Nottingham, 10. ix. and 10. xii. 1912.
- H. rhaetica** Bret. Mansfield, 8. v. 1912; Nottingham and Burton Joyce, 16. xii. 1912; Zouch Mills, 2. iv. 1913. Mapperley and Thurgarton, 24—28. iv. 1913 (*Hillman*).
- H. lampas** Eisen. Mansfield, 8. v. 1912; by canal at Nottingham, 10. ix. and 16. xii. 1912.
- H. nasuta** Eisen. Canal side, Nottingham, 10. ix. 1912: these species seem to be very fond of the damp mossy soil where the water splashes over the sluice.
- H. mariona** Friend. Between Burton Joyce and Lowdham, 16. xii. 1912. First record: the species was described from this material.
- H. parva** Friend. With the preceding species; also a first record, and described from this material.
- H. pusilla** Friend. Found under *Marchantia* by the overflow sluice of the canal, Nottingham, 10. ix. 1912; described from this material.
- H. bisetosa** Friend. Zouch Mills near Sutton Bonington, 2. iv. 1913. Found also at Hoveringham by Mr. H. Hillman, 28. iv. 1913. Described from this material.
- H. hillmani** Friend. Scarrington, 10. vi. 1913 (*H. Hillman*). The species was described from this material in the *Journ. Royal Micros. Soc.*, 1914, p. 136; so far it has not been recorded from any other British locality.
- H. curiosa** Friend. Zouch Mills, 2. iv. 1913.
- H. hibernica** Southern. Two specimens from Mapperley, Nottingham, 24. iv. 1913 (*Hillman*); first English record.
- H. inusitata** Friend. Rolleston Junction, 26. iii. 1912. Thurgarton Priory, 28. iv. 1913 (*Hillman*).
- H. multispinosa** Friend. Under moss, overflow from canal, Nottingham, 16. xii. 1912. Thurgarton Priory, 28. iv. 1913 (*Hillman*).

BUCHHOLZIA Mich.

B. appendiculata Buch. From garden on Woodborough Road, Nottingham, 21. iv. 1913; Trent side, Nottingham, 1. v. 1913; in moss at base of church tower, Rolleston, 14. v. 1913 (*Hillman*).

B. fallax Mich. Zouch Mills near Sutton Bonington, 2. iv. 1913. Trent side, Nottingham, 1. v. 1913 (*Hillman*).

MARIONINA Mich.

M. crassa Clap. In decayed hot-house bed, Woodborough Hall gardens, 17. xii. 1912.

M. georgiana Mich. By canal side, Nottingham, 16. xii. 1912.

LUMBRICILLUS Oerst.

L. subterraneus Vejd. Nottingham, 21. v. 1895 (*Carr*). Clifton, 13. iii. 1912 (*Friend and Carr*).

L. verrucosus Clap. Abundant in slimy vegetable matter at the flour mill at Southwell station, 26. iii. 1912; by canal, Nottingham, 15. iv. and 16. xii. 1912; Mansfield, 8. v. 1912. Woodborough Road, Nottingham, 21. v. 1913, in garden (*Hillman*).

L. lineatus O. F. Müll. By the canal, Nottingham, 15. iv. 1912.

ENCHYTRAEUS Henle.

E. albidus Henle. Clifton, 13. iii., and Southwell, 26. iii. 1912; Nottingham, 15. iv. 1912; Mansfield, 7. v. 1912; Beeston, among decaying cabbage stalks, 16. xii. 1912; Nottingham, by canal, same date; Woodborough Hall gardens, 17. xii. 1912. "On April 24, 1912, Professor Carr sent me, from Sherwood Rise, decaying roots of Hollyhock full of this species" (*Friend*).

E. pellucidus Friend. Clifton, 13. iii. 1912; by the canal, Nottingham, 16. xii. 1912; Colwick Road, Nottingham, 19. v. 1913, and elsewhere.

E. minimus Bret. Nottingham, 7. xi. 1911, and frequently later; Rolleston Junction and Southwell, 26. iii. 1912; Mansfield, 8. v. 1912; Burton Joyce, 16. xii. 1912; Zouch Mills, 2. iv. 1913.

E. nigrinus Bret. Canal bank at Nottingham, 7. xi. 1911, and subsequently; Clifton, 13. iii. 1912; by the wall of the

mill at Southwell station, 26. iii. 1912; Mansfield, 8. v. 1912. Wells Road, Nottingham, 21. v. 1913 (*Hillman*).

E. buchholzi Vejd. Mansfield, 7. v. 1912; Zouch Mills, 2. iv. 1913. Mapperley, April and May, 1913 (*Hillman*).

E. argenteus Mich. (= *E. parvulus* Frd.) Mapperley, Nottingham, 24. iv. 1913 (*Hillman*).

FRIDERICIA Mich.

F. agricola Moore. In hedge-bottom in field beyond Barnby Gate, Newark, 3. v. 1911; in old elm stumps at Clifton, 13. iii. 1912; Burton Joyce, 16. xii. 1912.

F. bretscheri Southern. Rubbish heap at Rolleston Junction, 26. iii. 1912—first indisputable English record. A specimen of what is probably this species sent from Mapperley, Nottingham, 24. iv. 1913, by Mr. Hillman.

F. bulbosa Rosa. Newark, 3. v. 1911; towing path by canal, Nottingham, 7. xi. 1911, and subsequently; Rolleston Junction, 26. iii. 1912; Burton Joyce, 16. xii. 1912; Mansfield, 8. v. 1912; Zouch Mills, 2. iv. 1913. Hoveringham, 28. iv. 1913 (*Hillman*).

F. glandifera Friend. Rolleston Junction, 26. iii. 1912: first record, described from this material; Mansfield, 8. v. 1912. Hoveringham, 28. iv. 1913 (*Hillman*).

F. leydigi Vejd. Somewhat common in decaying twigs and mould in ditches beyond Barnby Gate, Newark, 3. v. 1911.

F. connata Bret. By the canal, Nottingham, 7. xi. 1911 (first record for England), also 10. ix. 1912; Mansfield, 7. v. 1912. Hoveringham, 28. iv. 1913; Scarrington, 10. vi. 1913 (*Hillman*).

F. diachaeta Bret. Ditch just beyond the Fairham Brook on road from Ruddington to Clifton, 13. iii. 1912; Rolleston, 26. iii. 1912: first records for Britain. Wells Road, Nottingham, 26. v. 1913 (*Hillman*).

F. galba Hoffm. Beyond Barnby Gate, Newark, 3. v. 1911; Rolleston, 26. iii. 1912; Zouch Mills, 2. iv. 1913.

F. michaelsoni Bret. Aspley Woods, Nottingham, in rotten wood, 3. iv. 1912 (*Carr*). Mansfield, 7. v. 1912; Woodborough Hall gardens, 17. xii. 1912; Burton Joyce, 16. xii. 1912; Zouch Mills, 2. iv. 1913. Colwick Road, Nottingham, 19. v. 1913; Hoveringham, 28. iv. 1913 (*Hillman*).

- F. glandulosa** Sthrn. Beyond Barnby Gate, Newark, 3. v. 1911.
- F. humilis** Friend. In tree stumps at Clifton Grove, 13. iii. 1912 (*Friend and Carr*).
- F. lobifera** Vejd. With the last in rotten stumps at Clifton Grove, 13. iii. 1912 (*Friend and Carr*). Mansfield, 8. v. 1912; Burton Joyce, in considerable numbers, 16. xii. 1912. Var. *minor* Friend, with the type at Mansfield.
- F. perrieri** Vejd. Newark, 3. v. 1911; Rolleston Junction, 26. iii. 1912; Mansfield, 8. v. 1912; by the canal at Nottingham, 10. ix. 1912; Zouch Mills, 2. iv. 1913. Hoveringham, 28. iv. 1913; pond in vicarage grounds, Rolleston, 14. v. 1913 (*Hillman*).
- F. polychaeta** Bret. In rotten elm stumps, Clifton Grove, 13. iii. 1912 (*Friend and Carr*). Mansfield, 8. v. 1912; very fine at Burton Joyce, 16. xii. 1912; Zouch Mills, 2. iv. 1913.
- F. reversa** Friend. Canal side, Nottingham, 7. xi. 1911; Zouch Mills, 2. iv. 1913. Trent side, Nottingham, 1. v. 1913 (*Hillman*).
- F. striata** Lev. Clifton, 13. iii. 1912 (*Friend and Carr*). Aspley Woods near Nottingham, in rotten wood, 3. iv. 1912; in rotten log at Car Colston, 11. iv. 1912 (*Carr*). Zouch Mills, 2. iv. 1913 (?)
- F. variata** Bret. By the canal at Nottingham, 7. xi. 1911.
- F. bisetosa** Lev. In sandy soil at Mansfield, 8. v. 1912; Woodborough, 17. xii. 1912; Zouch Mills, 2. iv. 1913.
- F. obtusa** Friend. With the foregoing at Mansfield: first British record.
- F. densa** Friend. Between the canal and wide ditch beneath the Castle, Nottingham, 16. xii. 1912. Rolleston, 14. v. 1913 (*Hillman*). A species of somewhat doubtful validity.
- F. callosa** Eisen. In decaying wood at Car Colston, 11. iv. 1912 (*Carr*).
- F. rotunda** Friend. By wall in Woodborough Hall gardens, 17. xii. 1912; described from this material in *Journ. R. Micros. Soc.*, 1914, p. 142.
- F. arborea** Friend. In the decaying stump of a stranded willow at Zouch Mills near Sutton Bonington, 2. iv. 1913. Mapperley, Nottingham, 4. v. 1913 (*Hillman*). Described from this material.

- F. paroniana** Issel. Trent side, Nottingham, 1. v. 1913 (*Hillman*).
- F. bulbifera** Friend. Thurgarton, 28 iv.; Trent side, Nottingham, 1. v.; Wells Road and Mapperley, Nottingham, 14—21. v., all 1913 (*Hillman*).
- F. inornata** Friend. Trent side, Nottingham, 1. v. 1913 (*Hillman*).
- F. valdensis** Issel. Garden on Woodborough Road, Nottingham, 16. iv. 1913; Hoveringham and Thurgarton, 28. iv.; and Trent side, Nottingham, 1. v. 1913 (*Hillman*).

CHAMAEDRILUS Friend.

- C. chlorophilus** Friend. Pond by Colwick Road, Nottingham, 19. v. 1913 (*Hillman*).

MEGASCOLICIDAE.

MICROSCOLEX Rosa.

- M. phosphoreus** Duges. Three specimens, one adult and two young, of this luminous worm were found by Mr. H. Hillman in the soil of a box of sweet-pea seedlings grown at Mapperley, Nottingham, 24. iv. 1913: it is doubtless an importation.

LUMBRICIDAE.

ALLURUS Eisen.

- A. (Eiseniella) tetraedrus** Sav. With its var. *luteus* Friend, by the Trent, Kelham, 2. v. 1911; Clumber, 19. v. 1891; Clifton, Nottingham, Beeston, Mansfield, Burton Joyce, Woodborough, etc., 1912; Southwell and Rolleston, 26. iii. 1912; Zouch Mills, 2. iv. 1913. Thurgarton, Rolleston, mill-dam near Lowdham, Scarrington, April—June, 1913 (*Hillman*). One of our commonest species, found wherever there is water.
- A. (?) mollis** Friend. Burton Joyce, 16. xii. 1912: first record, described from this material.

EISENIA Malm.

- E. rosea** Sav. Very frequent in gardens in Nottingham and throughout the county, *e.g.*, Kelham, Ruddington, Clifton, Beeston, Woodborough, Mansfield, Zouch Mills, Stapleford, etc.

- E. foetida** Sav. The "Brandling," a favourite bait worm, found in dung and rich earth, and widely distributed. Carburton, 19. v. 1891; Nottingham, 17. iii. 1892; Clifton, 13. iii. 1912; Woodborough Hall gardens, 17. xii. 1912, etc.

ALLOLOBOPHORA Eisen.

- A. caliginosa** Sav. (Includes *A. trapezoides* and *A. turgida*: the latter is the more usual form in this county). Worksop, 19. v. 1891; Nottingham, 14. vi. 1892; Ruddington and Southwell, March, 1912; Stapleford, 8. v. 1913, etc.
- A. longa** Ude. Common and universally distributed in the county.

APORRECTODEA Oerley.

- A. chlorotica** Sav. The Green worm. Carburton, 19. v. 1891; Kelham, 2. v. 1911. Nottingham, Ruddington and Clifton, 13. iii. 1912 (*Friend and Carr*). Mansfield, 7. v. 1912; Beeston and Woodborough, 16. xii. 1912; Zouch Mills, 2. iv. 1913. Common about Nottingham.

DENDROBAENA Eisen.

- D. subrubicunda** Eisen. Very frequent in rich leaf mould, well rotted manure, etc. Clumber, 19. v. 1891; Nottingham, 17. vi. 1892; Southwell, 26. iii. 1912; Mansfield, 8. v. 1912; Beeston and Woodborough, 16—17. xii. 1912; Zouch Mills, 2. iv. 1913; Stapleford, 8. v. 1913. Mapperley, Nottingham, 24. iv. 1913 (*Hillman*).
- D. arborea** Eisen. From rotten wood at Car Colston, 11. iv. 1912 (*Carr*). Old elm stumps, Clifton Grove, 13. iii. 1912 (*Friend and Carr*). Rolleston, 26. iii. 1912. Mapperley, Nottingham, 24. iv. 1913 (*Hillman*).
- D. mammalis** Sav. In two localities in Clifton parish, 13. iii. 1912 (*Friend and Carr*). Zouch Mills, 2. iv. 1913.

HELODRILUS Hoffmstr.

- H. oculatus** Hoffm. Abundant in a ditch below the station at Beeston, 16. xii. 1912; in good numbers on the Notts. border near Zouch Mills, 2. iv. 1913.

BIMASTUS Moore.

- B. eiseni** Lev. Aspley Woods near Nottingham, in rotten wood, 3. iv. 1913 (*Carr*). Stapleford, 8. v. 1913.

OCTOLASIUM Oerley.

- O. lacteum** Oerley. Worksop, 19. v. 1891; Clifton, 13. iii. 1912.
- O. gracile** Oerley. Carburton, 19. v. 1891; Kelham, 2. v. 1911; Clifton, 13. iii. 1912; Zouch Mills, 2. iv. 1913.
- O. cyaneum** Sav. Woodborough Hall gardens, 17. xii. 1912.

LUMBRICUS Linn., em. Eisen.

- L. rubellus** Hoffm. Clumber, 19. v. 1891; Nottingham, 17. vi. 1892, and often subsequently; Kelham, 2. v. 1911; Clifton, 13. iii. 1912; Beeston, Burton Joyce, Woodborough, Mansfield, Zouch Mills, Stapleford, etc. Very common.
- L. castaneus** Sav. Also very common. Clumber, 19. v. 1891; Nottingham, 14. vi. 1892, and subsequently; Kelham, 2. v. 1911; Woodborough, 17. xii. 1912; Mansfield, 8. v. 1912; Zouch Mills, 2. iv. 1913; Rolleston, 14. v. 1913. Car Colston, 11. iv. 1912 (*Carr*).
- L. terrestris** L. Found in all localities visited. First identified at Clumber, 19. v. 1891.

POLYZOA.

THE Polyzoa are aquatic animals forming colonies which are often leaf-like or tree-like in form, often superficially resembling seaweeds or bearing a close general similarity to the Hydroid Zoophytes. From the latter, however, they are structurally totally different and possess a much higher type of organization, the most striking difference being the presence in the Polyzoa of a true body cavity in which the digestive tract or alimentary canal—U-shaped in form—is suspended.

The vast majority of the Polyzoa are marine, but a few inhabit fresh water. One of the most familiar members of the group is the 'Sea-Mat' (*Flustra foliacea*), a tough, brownish, paper-like object common on our sea-beaches; this when viewed with a strong lens is seen to consist of a great number of oblong cells or chambers ('zooezia') of horny material, closely arranged in two layers placed back to back. In the dendritic forms the zooezia are arranged along the branches of the colony in a single or double row. At the upper end of each zooezium is an orifice through which the tentacles of the animal protrude. These tentacles are numerous and ciliated, and are united at their base to form a funnel-shaped structure at the bottom of which the mouth is situated; they are seated upon a ridge or 'lophophore,' which may be horse-shoe shaped or circular, and they can be retracted with great rapidity within the zooezium. By means of the vibratile cilia covering the surface of the tentacles currents are set up which bring food to the mouth and also maintain the supply of oxygen for respiration.

The whole colony is supported by a firm cuticular exoskeleton which may be gelatinous, horny or calcareous. The colony is almost invariably fixed to a rock or seaweed, either by its base in the dendritic and leaf-like forms, or as an incrustation, when it forms a thin flat expansion consisting of a single layer of zooezia in close contact with one another. Only in the freshwater *Cristatella* and one or two others is the colony free.

The freshwater species commonly occur attached to the stems and leaves of water plants, or to stones.

The colonies of *Plumatella* and *Fredericella* form series of delicate branching tubes: in *Alcyonella* the tubes are parallel and closely aggregated. *Lophopus* and *Cristatella* form gelatinous masses, the former divided into a few short lobes, the latter slug-like. In *Fredericella* the lophophore is circular, in the other freshwater genera it is horse-shoe shaped.

Cristatella is remarkable for its power of movement as a whole: the colony is slug-shaped, two or more inches in length, with a flattened sole-like base on which it crawls very slowly. It has not yet been found in Nottinghamshire.

The following species of freshwater Polyzoa are recorded for Nottinghamshire in the *Trans. Nottm. Nat. Soc.* for 1896-7, 1903-4, and 1908-9, on the authority of Mr. W. H. Pratt:—

LOPHOPUS Dum.

L. crystallinus Pall. Beeston canal; pond at Gamston; a beautiful colony on a decaying leaf in a ditch at Beeston, 1909.

ALCYONELLA Lam.

A. fungosa Pall. Lake at Papplewick.

PLUMATELLA Lam.

P. repens L. Overflow from Wollaton canal between Ilkeston Road and the Saw-mills; ponds by the Trent opposite Hoveringham.

FREDERICELLA Gerv.

F. sultana Blum. Overflow from Wollaton canal; Grantham canal between Nottingham and Gamston.

PALUDICELLA Gerv.

P. articulata Ehr. (= *P. ehrenbergi* Van Ben.) Overflow from Wollaton canal.

MOLLUSCA.

THE Mollusca are soft-bodied unsegmented animals usually covered by a hard calcareous shell which is secreted by the mantle or external covering of the body. The mantle may be continuous and completely encircle the body, or it may form a pair of lateral lobes, one on either side. The shell formed by the mantle is correspondingly univalve or bivalve. In the former case it may be elongated and tubular, as in the Tooth-shells (Scaphopoda), or cup-shaped or spirally coiled (Gastropoda); in the latter it consists of two separate pieces or valves. In the Chitons (Amphineura) the shell consists of eight plates which overlap one another like the plates of a woodlouse, and the animal can, like a woodlouse, roll itself into a ball. Occasionally the shell is thin and horny, and lies within the folds of the mantle so as to be partially or entirely concealed (some Slugs, Sea-Hares, etc.); or it may be completely internal, as in the case of the horny 'pen' of the Squid or the friable calcareous 'cuttle-bone' of the Cuttle-fish; or finally it may be altogether absent.

On the ventral surface of the body is a projecting muscular mass, the *foot*, or organ of locomotion; by its means the animal clings to the surface of rocks or plants, burrows in sand or mud, crawls, swims, or even leaps.

All the Mollusca possess a heart and a series of blood vessels containing colourless blood. Respiration is effected by means of gills, or in terrestrial forms by a lung. A body cavity (coelome) is present, but in a much reduced condition. Eyes, often of very complicated and perfect structure, occur in many Molluses.

The majority of the Mollusca are marine, and live at all depths in the ocean; many are freshwater, many others terrestrial.

The Mollusca are classified as follows:—

- Class I. AMPHINEURA. Chitons ('Coat-of-mail Shells' or 'Sea-woodlice'), etc.
- „ II. GASTROPODA.
- „ III. SCAPHOPODA. Tooth-Shells.
- „ IV. PELECYPODA or LAMELLIBRANCHIA.
- „ V. CEPHALOPODA. Nautilus, Octopus, Squids, Cuttle-fishes, etc.

Classes I, III, V, comprising exclusively marine Molluses, do not concern us.

The *Gastropoda* include the Snails and Slugs, Limpets, Whelks, Periwinkles and such-like. The body is asymmetrical, and the shell is in a single piece and is usually spirally coiled, but is cup-shaped or shortly conical in the Limpets; in the Sea-Hares and Slugs it is greatly reduced and often concealed within the mantle; occasionally it is altogether absent. In many Gastropods the aperture of the shell is closed, when the animal is retracted, by a flat plate, the *operculum*, which is attached to the upper surface of the foot. It is usually of a horny nature, but in some marine genera is thick, hard and calcareous.

The foot is well-developed and has a broad and flat base for crawling; in front is the head region, bearing eyes and tentacles. A peculiar ribbon-shaped rasping tongue, or *odontophore*, bearing numerous rows of minute teeth, lies in the floor of the anterior part of the alimentary canal: this is used for rasping or scraping the vegetable food.

The majority of the Gastropods are marine, but many inhabit fresh water, and others are terrestrial.

The British freshwater and terrestrial Gastropods are comprised in the two Orders *Pulmonata* and *Prosobranchiata*. The *Pulmonata* are air-breathing Mollusca, provided with a pulmonary sac or 'lung,' and the shell, when present, is without an operculum; the sexes are united. They are still further divided into two Sub-orders: (1) *Stylommatophora*, forms with two pairs of retractile tentacles, with eyes at the tips of the upper pair; (2) *Basommatophora*, in which the eyes are at the base of the single pair of tentacles, which are not retractile; an external shell is always present. The *Prosobranchiata* have usually a single gill, or a pulmonary sac, placed in front of the heart, and the head is provided with a single pair of tentacles; a shell is present, usually with an operculum; the sexes are separate.

The *Pelecypoda* or Bivalve Molluscs possess a bilaterally symmetrical body, compressed from side to side, and enclosed in a shell consisting of two separate pieces or valves secreted by a two-lobed mantle. The valves are usually equal in size, but in many marine Bivalves, such as the Oyster, one is larger than the other; they are connected along a part of the margin by a horny elastic *ligament*, and generally by interlocking teeth in addition. During life they can be kept tightly closed by one or two powerful muscles attached to the interior of the shell on either side.

Bivalves have no head and no odontophore. The mouth is merely an aperture at the front end of the body. The gills are large and leaf-like, and situated on either side of the body; they are covered with delicate vibratile cilia which set up currents in the surrounding water.

All Bivalves are aquatic and most are marine. They obtain their food, consisting of minute organisms or particles of animal and vegetable matter, from the water which is constantly being drawn into the body. They therefore for the most part live sluggish, sedentary lives, burrowing in sand or mud or attached to rocks. Some can excavate burrows in stone or wood: many creep about by the slow contraction and expansion of the protruded foot; some, by sudden movements of the foot, can progress by leaps or jerks; while a few can swim by the alternate opening and snapping together of the valves of the shell. All the British freshwater Bivalves belong to the Order *Eulamellibranchiata*, characterised by their firm, complex gills, which have a texture like closely-woven basket-work.

The Nottinghamshire Mollusca have been well worked out by local naturalists who have from time to time published accounts of their investigations. The first of these was E. J. Lowe, F.R.S., of Highfield House, Beeston, whose indefatigable researches, published in the *Proceedings of the Linnean Society*, xlv. 1851; the *Zoologist*, March 1852; the *Annals and Magazine of Natural History*, Sept. 1852; *The Conchology of Nottingham*—a small work published at Nottingham in 1853; and *Allen's Illustrated Handbook to Nottingham* (1866), form the basis of all subsequent lists. The same naturalist, in collaboration with C. T. Musson, F.L.S., contributed an article with additional information to the *Midland Naturalist* for Aug. 1879, and in the same year Mr. Musson gave a list of Nottinghamshire species in the pages of *The Forester*, the Magazine of the Nottingham High School. In 1881 Mr. Musson and Mr. B. Sturges Dodd published a list in the *Transactions of the Nottingham Naturalists' Society*. Two lists, brought up to date, appeared in 1893: one written by Mr. B. Sturges Dodd in the British Association Hand-book prepared for the Nottingham meeting in that year; the other from the pen of Mr. W. A. Gain in the *British Naturalist* for November. In 1906 Mr. B. Sturges Dodd and Mr. B. B. Woodward summarized all our existing knowledge of the Notts. Mollusca in the *Victoria History of Nottinghamshire*, vol. i.

The magnificent *Monograph of the Land and Freshwater Mollusca of the British Isles*, by J. W. Taylor, F.L.S., now in course of publication, gives much hitherto unpublished information on the Nottinghamshire species, but is still far from completion. The inconvenience arising from this latter fact has, however, been removed by the kindness of Mr. W. Denison Roebuck, F.L.S., who is collaborating with Mr. Taylor in the production of the work. Mr. Roebuck, who has in his possession a large quantity of unpublished material, and who, along with Mr. J. W. Taylor, has identified large collections of Nottingham-

shire Mollusca made by Messrs. Musson, Gain, Pickard, Mellors, Oldham and others, has, with a generosity that can scarcely be adequately acknowledged, written out for the purposes of this work a complete transcript of all his notes on the Nottinghamshire species. It is mainly from these notes that the list here given has been drawn up, and it will be noticed how largely Mr. Musson's researches have contributed to our knowledge of Nottinghamshire Conchology.

The number of indigenous species of non-marine Mollusca living in the British Isles is approximately 145. Of this number 115 have been found in Nottinghamshire, and two others—*Hygromia rufescens* and *H. revelata*—have been recorded, but almost certainly in error. Three other species, not now found living in the county, have occurred as fossils in Holocene deposits, viz., *Vallonia excentrica* and *Vertigo alpestris* at Wheatley near Retford, and *Pomatias elegans* at Scarthing Moor near Tuxford; these are not included in the appended list.

These figures may be regarded as fairly satisfactory when account is taken of the fact that the soil of Nottinghamshire is not very suitable for terrestrial Mollusca, owing to the predominance of sand and clay and the comparative absence of calcareous formations such as Chalk and Oolite. On the strip of Magnesian Limestone which occurs on the western border of the county the terrestrial forms are however common, while in canals, streams and lakes in all parts of the county freshwater Molluscs are abundant.

GASTROPODA.

PULMONATA.

STYLOMMATOPHORA.

TESTACELLA Cuv.

T. haliotidea Drap. Highfield House, Beeston (*Dodd*). Carlton Hall, Carlton-on-Trent (*L. Pope*). Introduced from Horsham, Sussex, into the gardens of Rainworth Lodge, in June 1886, by Mr. J. Whitaker.

T. scutulum Sow. Welbeck Abbey (R. A. Rolfe, *teste* Taylor).

[**T. maugei** Fér. "Erroneously recorded for Welbeck Abbey by C. T. Musson." (Taylor, *Mon. L. and F. W. Moll. of Brit. Isles*, p. 26).]

LIMAX Linn.

L. maximus L. Nottingham; Highfield House, etc., Beeston; Bramcote; Chilwell; Thrumpton; etc. (*Lowe*). Nottingham gardens, July 1888 (*G. W. Mellors*). Lenton; Tollerton; Felley Abbey; Annesley; Staunton; Pleasley Vale; Creswell Crags; Worksop (*Musson*). Mansfield (*E. Pickard*). Southwell Minster yard, Sept. 1892 (*C. Oldham*). Tuxford (*Gain*). Welbeck (*Rolfe*).

var. *fasciata* Raz. In gardens, Nottingham (*Musson, Mellors*). Tuxford, July 1885 (*Gain*). Worksop and Markham Clinton, April 1884 (*Musson*). The sub-var. *mulleri* Moq. was taken by C. T. Musson, 26. v. 1885, crawling on road at Mapperley, Nottingham.

var. *sylvatica* Morel. Pleasley Vale, April 1884 (*Musson*). Tuxford, July 1884 (*Gain*).

var. *cellaria* D'Arg. Nottingham, in cellar; Basford, under stones in garden, 12. ix. 1884; Wilford, 25. x. 1884; Beauvale Priory, 15. ix. 1884; Annesley Park, 15. ix. 1884 (*Musson*). Tuxford, 8. vii. 1884, and subsequently (*Gain*). Farnsfield, 23. ix. 1892 (*C. Oldham*).

var. *ferussaci* Moq. Tuxford, July 1885 (*Gain*).

L. flavus L. In cellars at Highfield House and Nottingham (*Lowe*). Nottingham (*Dodd, Mellors*). Lenton; Attenborough; Pleasley Vale (*Musson*). Oxtun and Farnsfield, ix.—x. 1892 (*Oldham*). Tuxford, June 1884 (*Gain*).

var. *colubrina* Pini. Tuxford, in cellar of house (*Gain*).

L. arborum Bouch.-Chant. Abundant on apple and walnut trees in the orchard at Highfield House, and on apples, walnuts and poplars at Broadgate House, Beeston; also on the bridge over the Tottle Brook below Beeston Hill; sparingly at Thrumpton (*Lowe*). Nottingham; Wilford; Tollerton; Mansfield; Southwell; Pleasley Vale; Creswell Crags; Tuxford; Welbeck (*Musson*). Haughton (*Gain*). Nottingham and Creswell Crags, Sept. 1913 (*R. Welch*).

AGRIOLIMAX Mörch.

A. agrestis L. Abundant everywhere in the county.

var. *reticulata* Müll. Everywhere common.

var. *brunnea* Tayl. Railway embankment, Colwick, 11. ix. 1884; Wollaton, 1. xi. 1884; Beauvale Priory, 15. ix. 1884; Worksop, 15. iv. 1884 (*Musson*). Garden at Tuxford, 6. iv. 1885 (*Gain*).

var. *punctata* Pic. Garden at Tuxford, 3. ix. 1885 (*Gain*).

var. *nigra* Morel. Mapperley, Nottingham, on grassy roadside, 23. v. 1885; Beauvale Priory, 15. ix. 1884 (*Musson*). Tuxford, in garden, 3. vi. 1888 (*Gain*).

A. laevis Müll. Abundant near the lake at Highfield House and in the garden of Broadgate House, Beeston (*Lowe*). Gamston near Nottingham; Haughton near Tuxford, in the Decoy and at the ruined Chapel; Rufford; Bawtry; etc., 1884-85 (*Musson*). Kirkby-in-Ashfield; Pleasley Vale (*Dodd*). Attenborough, 23. ix. 1913; Edwinstowe, 25. ix. 1913 (*R. Welch*).

var. *parvula* Norm. (=var. *pygmaea* Lowe). Under stones and at roots of sedge by the edge of the lake at Highfield House, but not very abundantly; Beeston, common (*Lowe*).

MILAX Gray.

M. gagates Drap. Garden at Tuxford, numerous, 8. vii. 1885, the var. *plumbea* Moq. (*Gain*).

M. sowerbii Fér. Highfield House near Beeston (*Lowe* and *Musson*, *Midl. Nat.*, Aug. 1879).

ARION Linn.

A. ater L. Common and universally distributed.

var. *aterrima* Tayl. Colwick, railway embankment near the station, 11. ix. 1884; Langar, 2. ix. 1884; Creswell Crags, 14. iv. 1884 (*Musson*).

var. *castanea* D. & M. Nottingham, 24. vii. 1888 (*Mellors*). Chilwell, 12. ix. 1912 (*H. Preston*). Wollaton, 1. xi. 1884; Felley Abbey, 15. ix. 1884; Newark, 3. x. 1884; Creswell Crags, 14. iv. 1884 (*Musson*). Southwell, 23. ix. 1892 (*C. Oldham*). Tuxford, abundant in garden, 8. vii. 1885 (*Gain*).

var. *plumbea* Roeb. Pleasley Vale, 10. iv. 1884 (*Musson*). Tuxford (sub-var. *cinerea*) (*Gain*). Gardens on Wells Road, Nottingham (sub-var. *cinerea*), 25. vi. 1888 (*Mellors*).

var. *rufa* L. Stanton-on-the-Wolds (*Lowe*). Nottingham (*Dodd*). Mapperley, Nottingham, ii. 1894 (*C. Ashford*). Pleasley Vale, 10. iv. 1884; Markham Clinton, 13. iv. 1884 (*Musson*). Tuxford, 8. vii. 1884; Ossington, under log in wood (*Gain*).

var. *succinea* Müll. Meadows below Highfield House (*Lowe*, 1885). Creswell Crags and Pleasley Vale, sub-var. *melanocephala*, April 1884 (*Musson*).

var. *albolateralis* Roeb. Four specimens under a log, Thoresby Park, Edwinstowe, June 1906 (*J. Ray Hardy*).

var. *bicolor* Roeb. Railway embankment near Colwick station, 11. ix. 1884 (*Musson*). East Markham (*Gain*).

var. *marginella* Schranck. Pleasley Vale, Markham Clinton and Worksop, April 1884 (*Musson*). The sub-var. *nigrescens* Moq. at Colwick, 11. ix. 1884 (*Musson*). Southwell, 23. ix. 1892 (*Oldham*). Tuxford and Ossington (*Gain*).

A. subfuscus Drap. Markham Clinton, 13. iv. 1884 (*Musson*). Garden at Tuxford, type and sub-var. *brunnea* Lehm., 6. iv. 1885 (*Gain*). Sherwood Forest near Edwinstowe, 25. ix. 1913 (*R. Welch*).

A. hortensis Fér. Generally distributed and common.

var. *fasciata* Moq. and sub-var. *nigra* Moq., Tuxford, April 1885 (*Gain*).

var. *subfusca* C. Pfr. Felley Abbey, 15. ix. 1884; Worksop, common, 15. iv. 1884; Creswell Crags, 14. iv. 1884; Pleasley Vale, 10. iv. 1884; Markham Clinton, 13. iv. 1884 (*Musson*). Tuxford (*Gain*).

A. circumscriptus Johnst. Gardens on Wells Road and Hunger Hills, Nottingham, 7. v.—25. vi. 1888 (*Mellors*). Mapperley, Colwick, Wollaton, Beauvale Priory, Staunton, Pleasley Vale, Creswell Crags, Markham Clinton, Haughton, etc. (*Musson*). Plentiful in gardens and fields about Tuxford (*Gain*). Creswell Crags, 22. ix. 1913 (*R. Welch*).

var. *neustriaca* Mab. Wollaton, 1. xi. 1884; Worksop, 15. iv. 1884; and sub-var. *pallida* Roeb., Colwick, 11. ix. 1884 (*Musson*). Sub-var. *celtica* Poll., near Newark (*Gain*).

A. intermedius Norm. Gamston near Nottingham; Felley Abbey, Sept. 1884 (*Musson*). Southwell, Sept. 1892, common (*C. Oldham*). Tuxford, in gardens and woods (*Gain*). Creswell Crags, 22. ix. 1913 (*R. Welch*).

var. *plumbea* Coll. Newark, W. A. Gain (*Collinge*).

VITRINA Drap.

V. pellucida Müll. Common amongst damp grass, moss and dead leaves in woods, under ivy on old walls, under logs in damp places, etc., throughout the county.

HYALINIA Charp.

H. cellaria Müll. Common throughout the county, under loose stones, logs, etc., and in cellars.

var. *complanata* Jeffr. In damp cellar, Goldsmith Street, Nottingham, March 1884 (*Musson*).

var. *obscura* Loc. Garden at Tuxford, Sept. 1896 (*Gain*).

var. *margaritacea* Schmidt. Stanton-on-the-Wolds, 19. iv. 1878; Mapperley, and in a cellar in Goldsmith Street, Nottingham, April 1878; Pleasley Vale and Carlton-on-Trent, March 1884 (*Musson*). Tuxford and Creswell Crags, April 1885 (*Gain*).

H. helvetica Blum. Common among damp moss and under stones (*Dodd*). Highfield House, Wollaton, etc. (*Lowe* and *Musson*). Beauvale Priory, Pleasley Vale and Creswell Crags, April 1884 (*Musson*). Creswell Crags, 22. ix. 1913 (*R. Welch*).

H. alliaria Mill. Common and widely distributed, especially on the Magnesian Limestone, among decaying leaves in woods, under loose stones, logs, etc.

var. *viridula* Jeffr. Mansfield, under stones, 1881 (*E. Pickard*).

H. nitidula Drap. Very common everywhere amongst moss, grass and dead leaves in woods, under loose stones, dead branches, etc.

var. *nitens* Mich. In woods, Stanton-on-the-Wolds, several, 19. iv. 1878 (*Musson*). Arnold (*Dodd*).

var. *virens-albida* Mich. (= *helmii* Gilb. and Alder). Kingshaugh, April 1885, and elsewhere near Tuxford (*Gain*).

H. pura Alder. Common and widely distributed.

H. radiatula Alder. Abundant amongst moss at Wollaton and Highfield House; sparingly at Stanton-on-the-Wolds, Oxtun and Radford (*Lowe*). West Bridgford; Tollerton; Thrumpton; Beauvale Woods; Stanford; Trent rejectamenta, Carlton-on-Trent; generally amongst dead leaves in woods (*Musson*). Pleasley Vale (*Dodd*).

H. crystallina Müll. Common throughout the county in damp places, under loose stones, amongst moss, grass, twigs, dead leaves, etc.

H. fulva Müll. Distributed throughout the county amongst damp leaves, twigs, etc., in woods and shady places.

ZONITOIDES Lehm.

Z. excavatus Bean. Apparently rare in Nottinghamshire. Attenborough (*Lowe* and *Musson*). Clifton (*Dodd*). Sherwood Forest (*J. Ray Hardy*).

Z. nitidus Müll. Amongst moss and herbage in damp woods and on margins of streams, canals, ponds, etc. Highfield

House; Beeston; Radford; Wollaton; Oxtou (*Lowe*). By the Trent at Nottingham and Attenborough; amongst grass and flags by canal side at Gamston; Holme Pierrepont; Epperstone; Gotham; Stanton-on-the-Wolds; Stanford-upon-Soar; Strelley; Greasley; Pleasley Vale; Southwell; Newark; Haughton Decoy (*Musson*).

- [**Z. minusculus** Binney. A North American and West Indian species found in an orchid house at Bluebell Hill, Nottingham, by Mr. Musson, in 1883. Introduced with plants].

PUNCTUM Morse.

- P. pygmaeum** Drap. Beneath stones, moss, dead leaves, etc., in woods. Sparingly at Highfield House and Stanton-on-the-Wolds (*Lowe*). Wood near Wollaton Colliery: High Park Wood, Beauvale; Lenton; Ruddington; Tollerton; Widmerpool; Pleasley Vale; Edwinstowe; rejectamenta of River Trent, Colwick and Carlton-on-Trent (*Musson*). Thrumpton, common, 3. i. and 5. ii. 1885 (*Dodd*). Amongst rejectamenta, Mansfield and Creswell Crags, April 1882 (*E. Pickard*).

PYRAMIDULA Fitz.

- P. rupestris** Drap. Recorded by Lowe and Musson (*Midl. Nat.*, Aug. 1879) and Dodd (*Brit. Assoc. Handbook*, 1893) as 'not uncommon in the county.' No localities are given, and we have no certain record of its actual occurrence in Nottinghamshire.
- P. rotundata** Müll. Universally distributed and very common.
- var. *turtonii* Flem. Radford, Feb. 1884 (*Musson*).
- var. *scalaris* Fér. Enumerated for the county, without locality (*Dodd, Brit. Assoc. Handbook*, 1893).
- var. *alba* Moq. Wood at Kirkby-in-Ashfield, 1. x. 1885 (*Musson*). Debdale near Mansfield, under stones; Creswell Crags (*Pickard*). Sherwood Rise, Nottingham; Pleasley Vale (*Dodd*).
- var. *rufula* Moq. Nottingham, in cellar, 19. iv. 1884 (*Musson*).
- var. *major* Loc. In a damp scullery, Highfield House, Beeston (*Lowe, Conch. Nottm.*, 1853).

HELIX Linn.

- H. aspersa** Müll. Common throughout the county, and often very abundant locally.

var. *albofasciata* Jeff. Mansfield, several, 12. iv. 1882 (*Pickard*).

var. *flammea* Pic. Worksop, April 1885 (*Gain*).

H. nemoralis L. Generally distributed and common in places.

The var. *libellula* Risso includes all individuals in which the ground colour of the shell is some shade of yellow; it embraces the great majority of the Nottinghamshire specimens. The following types of band-variation have been determined by Mr. J. W. Taylor and Mr. W. Denison Roebuck from Notts. specimens submitted to them, chiefly by Mr. C. T. Musson:—

(*) 12345.	(12345).	123(45).	(123)(45).	(12)345.
1(23)45.	(12)3(45).	(123)45.	00345.	00340.
00300.	003:0.	00000.		

var. *major* Fér. Not uncommon in the county (*Dodd*).

var. *minor* Moq. Thrumpton (*Lowe and Musson*).

var. *studeria* Moq., sub-var. *lilacina* West. West Bridgford, 1892 (*A. G. Stubbs*).

var. *castanea* Pic. Colwick, 20. iii. 1880 and Feb. 1884; Basford, Feb. 1884; Gedling Lane near Nottingham, July 1884 (*Musson*).

var. *rufozonata* Ckll. Attenborough, June 1878 (*Musson*).

var. *hyalozonata* Tayl. Ditch near Tuxford (*Gain*).

H. hortensis Müll. Widely distributed, but only occasionally common. Most of our specimens belong to the variety *lutea* Pic., and show the following types of band-variation, as determined by Messrs. Taylor and Roebuck:—

12345.	(12345).	123(45).	(123)(45).	(12)345
1(23)45.	(12)3(45).	(123)45.	1(2345).	1(234)5.
10345.	00345.	00000.		

var. *lutea* Pic., sub-var. *lutescens* Schmidt. Scarthing Moor near Tuxford, Sept. 1883 (*Musson*).

var. *minor* Moq. Thrumpton (*Musson*). Colwick (*Dodd*).

var. *alba* Pic., sub-var. *subalbida* Loc. Scarthing Moor, Sept. 1883 (*Musson*).

var. *lilacina* Tayl. Tuxford, July 1883 (*Gain*).

(*) For an explanation of these formulæ see Adams' Collector's Manual of British Land and Freshwater Shells, p. 66 (1896); or Taylor's Monograph, p. 290.

var. *roseolabiata* Tayl. Near Highfield House, 1853, and Bulwell, 1866 (*Lowe*). Plentiful at Wollaton, and in a lane at Basford, 1879 (*Lowe and Musson*).

var. *arenicola* Macg. Stanton-on-the-Wolds, Feb. 1884 (*Musson*).

HELICIGONA Fér.

H. lapicida L. Not common, occurring chiefly on the Magnesian Limestone under stones, leaves, etc., and on old walls. Beauvale Priory; Kirkby-in-Ashfield; Debdale near Mansfield, plentiful on walls, 10. vii. 1884; Pleasley Vale; Creswell Crags; also at Halloughton near Southwell, and at Egmanton, on the Keuper Marls (*Musson*). Mansfield Woodhouse (*E. Pickard*).

H. arbustorum L. Thinly scattered throughout the county and very local, although occasionally common where it occurs. Abundant at Thrumpton (*Lowe*). Colwick, plentiful among nettles in a very restricted habitat, 1884; Hoveringham, July 1878; Southwell, in hedgerows, rare; Carlton near Nottingham, in a hedgerow, rare; Thrumpton, 1884 (*Musson*). Oxtun Bogs, 23. v. 1887 (*Mellors*). Averham, June 1884 (*E. F. Becher*). Moorhouse and Scarthing Moor near Tuxford (*Gain*). Scarthing Moor, 29. iv. 1883, common in a hedgerow for about 200 yards (*Musson*). Pleasley Vale, 1881, abundant (*Pickard*). Cotgrave; Cropwell Bishop; Barnston (*F. H. W. Carnell*).

var. *conoidea* West. Darlton near Tuxford (*Dodd*).

var. *picea* Ross., sub-var. *fusca* Moq. Southwell, 21. vi. 1884 (*Capt. E. F. Becher*).

var. *alpicola* Fér. Near Darlton (*Dodd*).

var. *albina* Charp. Southwell (Dyson, *Manchester Shells*, 1850, p. 28). Colwick, 1893 (*Dodd*).

var. *flavescens* Fér. Colwick, common with type; Southwell, 20. vii. 1884, a few (*Musson*). Moorhouse (*Gain*).

var. *fuscescens* Moq. Southwell, one, 20. vii. 1884 (*Musson*). Dunham (*Dodd*).

var. *cincta* Tayl. Southwell, one, 20. vii. 1884 (*Musson*). Moorhouse near Tuxford (*Gain*).

HELICELLA Fér.

H. virgata Da Costa. Rare. Cotham near Newark, on the railway embankment, Dec. 1882 (*Musson*). Found subsequently in the same locality by J. N. Dufty. Gedling, one, 5. iv. 1884 (*Musson*). Also recorded for Highfield House, Lenton

Hall, and Stanton-on-the-Wolds by E. J. Lowe, and for Cotham and Alverton—in the last-named locality ‘plentifully’—by B. Sturges Dodd.

H. itala L. Very local, and apparently confined to the Rhaetic and Lias area. Abundant at Stanton-on-the-Wolds (*Lowe*). Railway embankment at Elton, and plentiful on herbage by roadside at Orston, 7. vi. 1886; Cotham, common on railway embankment with *H. virgata* and *H. caperata*, Dec. 1882 (*Musson*). Newark (*Gain*, 2. iv. 1885). Alverton (*Dodd*). Barnston and Cropwell Bishop (*Carnell*). “I have two specimens from Winthorpe in Nottinghamshire” (Rev. Revett Sheppard in *Trans. Linn. Soc.*, 1825, xiv. 160).

var. *alba* Charp. Stanton-on-the-Wolds (*Lowe*).

vars. *minor* and *deleta* Moq. occurred with the type at Cotham (*Musson*).

H. caperata Mont. Very abundant in one field only at Stanton-on-the-Wolds (*Lowe*, 1851). Gedling, common in one field, 5. iv. 1884; Widmerpool, common, 1879; Gotham; Ruddington Hill; Tollerton; Cotham; Carlton-on-Trent; Creswell Crags, numerous (*Musson*). Cropwell Bishop (*Carnell*).

var. *ornata* Pic. Field at Gedling, 5. iv. 1884 (*Musson*).

The monstrosity *subscalare* Jeffr., a trochiform or top-shaped form, was found at Stanton-on-the-Wolds by E. J. Lowe.

H. cantiana Mont. Rare and local. Plentiful on herbage by roadside at Staunton, 3. vi. 1886 (*Musson*). [Staunton is six miles south of Newark: subsequent writers give “Roadside near Newark, and at Stanton-on-the-Wolds” as localities for this species, but these are doubtless due to careless copying and misunderstanding of the original record].

HYGROMIA Risso.

[**H. rufescens** Penn. The occurrence of this species in Nottinghamshire is very doubtful. E. J. Lowe in his 1853 and 1866 Lists includes it among the species that had not been found in the county. In the *Midland Naturalist* for 1879 Messrs. Lowe and Musson describe it as ‘rare’ in Notts., no locality being specified, but in 1881 Messrs. Dodd and Musson again mention it as ‘not yet found in Notts.’ Later, however, Mr. Dodd, in the *British Association Handbook* for 1893, gives ‘Highfield House Estate’ as a locality for *H. rufescens* on the authority of E. J. Lowe! This record is repeated by B. B. Woodward in the *Victoria History of Nottinghamshire* (1906). Until more satisfactory

evidence is forthcoming we can certainly not claim this as a Notts. species. It is very curious that this species should be absent from the county as it occurs more or less commonly in all the surrounding counties, and it is therefore probable that a careful search will eventually reveal its presence in Notts.]

H. hispida L. (including *H. concinna* Jeffr.). Common everywhere in Nottinghamshire in damp places amongst grass and moss, under stones and logs, on old walls, etc.

var. *subglobosa* Jeffr. 'Not uncommon' (Dodd).

var. *conica* Jeffr. " " "

var. *subrufa* Jeffr. " " " At Creswell
Craggs about half the specimens are this variety (Pickard).
Carlton-on-Trent (Gain).

var. *albida* Jeffr. Nottingham Castle Rock, 4. iii. 1884;
Colwick; Radford, with type, common; Attenborough;
Stanton-on-the-Wolds; Creswell Craggs, 14. iv. 1884 (Musson).
Mansfield (Pickard).

H. fusca Mont. Rare, Highfield House (Lowe and Musson, 1879). Requires confirmation.

[**H. revelata** Fér. "This species was discovered in the latter end of September, 1851, amongst moss and fallen leaves under an oak tree at Stanton-on-the-Wolds, where three specimens were obtained. Professor Forbes, in his *History of the British Mollusca* [vol. iv. p. 71], remarks on this discovery 'Mr. Lowe, of Nottingham, has lately sent us specimens found by himself at Stanton-on-the-Wolds, a very anomalous locality.' A specimen has also been sent to Mr. Jeffreys, of Swansea, who likewise pronounces it an undoubted *Helix revelata*." (E. J. Lowe, *Conch. of Nottm.*, 1853, p. 77.)

Mr. B. B. Woodward, in the *Victoria History of Nottinghamshire*, writes "In this list *Hygromia revelata* is not included, the record of examples said to have been found at Stanton-on-the-Wolds by Mr. E. J. Lowe being obviously due to some error of observation."

H. granulata Alder. Rare at Bulwell, Oxtun, and Stanton-on-the-Wolds (Lowe, 1851). Rare, Clifton and Highfield House (Lowe and Musson 1879). Cotham; Darlton, very plentiful amongst grass in a hedge bottom by the roadside, extending along the road only for thirty or forty yards (Musson). Kingshaugh and Scarthing Moor near Tuxford (Gain).

ACANTHINULA Beck.

- A. aculeata** Müll. Widely distributed, but not very common. Highfield House and Stanton-on-the-Wolds (*Lowe*). Not uncommon at Wollaton, Thrumpton, and Stanton-on-the-Wolds (*Lowe* and *Musson*). Wollaton and Widmerpool, plentiful amongst leaves in woods; Lenton, Colwick and Thrumpton, amongst leaves in woods, rare; Epperstone Dumble; Pleasley Vale and Creswell Craggs; Carlton-on-Trent, a few in rejectamenta of River Trent; High Park Wood, Beauvale, rare (*Musson*). Kirkby-in-Ashfield, 6. viii. 1888 (*Mellors*). Debdale, Mansfield (*Pickard*).
- A. lamellata** Jeffr. Very rare. Four specimens in rejectamenta of stream at Creswell Craggs, 1881 (*Pickard*).

VALLONIA Risso.

- V. pulchella** Müll. Widely distributed and not uncommon.
- V. costata** Müll. On old walls and under stones, local. Radford; Chilwell; Wollaton; Barnston and Langar; several on walls in each place, Sept. 1884; Beauvale, 11. xi. 1888, abundant; Southwell (*Musson*).

ENA Leach.

- E. obscura** Müll. Widely distributed, but apparently not very common. Abundant at Nottingham Castle and Highfield House; Thrumpton (*Lowe*). Nottingham Castle Rock, under stones, rare, 20. i. 1883; Colwick Wood, among grass and twigs, and under stones, June 1878; Lenton, Clifton and Thrumpton, amongst leaves and twigs, scarce; Tollerton; Stanton-on-the-Wolds; Pleasley Vale and Creswell Craggs, under stones, 15. x. 1878, rare; Carlton-on-Trent, in rejectamenta of River Trent (*Musson*). Annesley (*Dodd*). Sutton-in-Ashfield (*Pickard*). Southwell Meadows, Aug. 1884 (*Capt. Becher*). Bevercotes Lane, Tuxford (*Gain*). Aspley and Watnall, sparingly (*F. H. W. Carnell*).

PUPA Drap.

- P. secale** Drap. Very rare. Nottingham Castle (*Lowe* and *Musson*, 1879). Requires re-discovery.
- P. cylindracea** Da Costa. Widely diffused and abundant in some localities. Very abundant at Nottingham Castle and at Highfield House (*Lowe*, 1851). Very plentiful at Sutton-in-Ashfield and Creswell Craggs; also at Chilwell (*Lowe* and

Musson, 1879). Lenton, amongst ivy in woods; Colwick, March 1875; Strelley; Bramcote, under ivy on a wall; Chilwell, rare, under ivy on a wall; Tollerton, amongst ivy in woods; Beauvale Priory, plentiful on stones, 15. x. 1878; Watnall, on a wall, 14. ix. 1884; Felley Abbey, very plentiful on old walls, Sept. 1884; Annesley, on wall of churchyard, 14. ix. 1884; Kirkby-in-Ashfield, on rock-cutting by roadside; Sutton-in-Ashfield, plentiful on walls under ivy, May 1878; Debdale, Mansfield, on walls, 10. vii. 1884; Pleasley Vale and Creswell Crags, plentiful on stones; Carlton-on-Trent (*Musson*).

var. *edentula* Moq. Highfield House estate (*Lowe*).

P. anglica Fér. Rare, Highfield House (*Lowe* and *Musson*, 1879). Grives Wood, Kirkby-in-Ashfield, on twigs in damp places, 1. x. 1885 (*Musson*).

P. muscorum L. Rare, Highfield House (*Lowe* and *Musson*, 1879). Creswell Crags (*Pickard*). Carlton-on-Trent; Scarthing Moor; rejectamenta of various streams near Tuxford, Darlton and Grassthorpe (*Gain*).

var. *edentula* Moq. Carlton-on-Trent, April 1883 (*Gain*).

var. *albina* Menke. Rejectamenta of stream, Scarthing Moor near Tuxford (*Gain*).

SPHYRADIUM Charp.

S. edentulum Drap. Plentiful at Widmerpool and rare at Wollaton (*Lowe* and *Musson*, 1879). Rare, Stanton-on-the-Wolds, and in a wood near Wollaton Colliery; Clifton and Thrumpton; Widmerpool, tolerably plentiful; High Park Wood, Beauvale, three specimens; Kirkby-in-Ashfield—amongst leaves in woods in all cases; Clumber Park, amongst leaves close to the lake (*Musson*). Debdale near Mansfield; rejectamenta at lower end of lake at Creswell Crags (*Pickard*). Carlton-on-Trent, in rejectamenta of Trent (*Gain*).

var. *columella* Benz. Kirkby-in-Ashfield, amongst dead leaves in wood on Magnesian Limestone, $2\frac{3}{4}$ mm. long, 1. x. 1885 (*Musson*).

VERTIGO Müll.

V. antivertigo Drap. Highfield House (*Lowe* and *Musson*, 1879). Kirkby-in-Ashfield; Pleasley Vale; East Drayton (*Musson*). Rejectamenta of stream at Scarthing Moor, and at Scarthing Moor Mill; also at Grassthorpe, Darlton, and

Carlton-on-Trent (*Gain*). Rejctamenta at Creswell Crags (*Pickard*).

V. substriata Jeffr. Rare. Highfield House, a single specimen amongst moss at edge of Lake (*Lowe*, 1853). Haggonfields, Worksop (*Rev. H. Friend*). Plentiful in rejctamenta of R. Trent at Carlton-on-Trent, 1883 (*Musson*). Creswell Crags, rejctamenta, 1881 (*Pickard*).

V. pygmaea Drap. Rare. Highfield House (*Lowe*, 1853). Widmerpool and Pleasley Vale, rare (*Lowe* and *Musson*, 1879). Woods at Wollaton, Widmerpool, and Kirkby-in-Ashfield, very rare; Thrumpton; Tollerton; Pleasley Vale, one from rejctamenta of brook (*Musson*). Scarthing Moor near Tuxford; Carlton-on-Trent, plentiful in rejctamenta of Trent (*Gain* and *Musson*). Grassthorpe, in rejctamenta (*Gain*). Darlton (*Gain*, 1885, and *R. Standen*, 1889). Oxtan Bogs, three specimens, 23. v. 1887 (*Mellors*). Creswell Crags, several, 1881 (*Pickard*).

V. moulinsiana Dup. Very rare. Darlton, one dead specimen (*Gain*). Carlton-on-Trent, a few in rejctamenta. April 1883 (*Musson* and *Gain*). Crow-hill, Mansfield (*Dodd* and *Woodward* in *Vict. Hist. Notts.*, 1906).

V. pusilla Müll. Very rare. Highfield House (*Lowe* and *Musson*). Carlton-on-Trent, a few in rejctamenta of R. Trent, April 1883 (*Musson*; also in 1885, *Gain*). Creswell Crags, rejctamenta, 1881 (*Pickard*).

V. angustior Jeffr. Rare. Creswell Crags, rejctamenta, 1881 (*Pickard*). Rejctamenta of R. Trent, Carlton-on-Trent, April 1883 (*Musson*). Scarthing Moor Mill and the stream at Scarthing Moor near Tuxford (*Gain*).

BALEA Gray.

B. perversa L. Rare: solitary individuals found at Wollaton, Bulwell, Thrumpton, and Highfield House (*Lowe*, 1853). Colwick; Annesley; rare (*Dodd*). Staunton, under stones of church wall, 3. vi. 1886 (*Musson*). A number found beneath the loose bark of willow trees growing near the junction and within each of the parishes of Darlton, East Markham and East Drayton, 1886 (*Gain*).

var. *simplex* Moq. Pleasley Vale and Creswell Crags, 1881 (*Pickard*).

CLAUSILIA Drap.

C. laminata Mont. Pleasley Vale, one dead specimen at base of rock outcrop, Oct. 1878; Creswell Crags, one, 14. iv.

1884 (*Musson*). Creswell Crags, in rejectamenta (*Pickard*).
Edwinstowe, one specimen, Sept. 1885 (*J. Ray Hardy*).
Clipston-on-the-Wolds, several very young specimens, 6. vi.
1887 (*A. Marshall*).

C. bidentata Ström. Generally distributed and common,
especially on the Magnesian Limestone.

var. *tumidula* Jeffr. Colwick Wood, June 1878; Clifton, 8.
iii. 1878; Thrumpton, 1883; Tollerton, 6. iii. 1880;
Sutton-in-Ashfield, April 1878; Carlton-on-Trent, 20. iv.
1882 (*Musson*). Debdale, Mansfield, 1881 (*Pickard*).

var. *gracilior* Jeffr. Mansfield, 14 by $2\frac{1}{4}$ mm., 1881 (*Pickard*).

var. *everetti* Mill. Colwick Wood, June 1878 (*Musson*).
White Quarry, Mansfield, 1882 (*Pickard*).

var. *albida* Jeffr. Debdale, Mansfield, on walls, several, 1881
(*Pickard*). Several taken in same locality by C. T. Musson,
10. iv. 1884 and 10. vii. 1884.

OPEAS Albers.

[**O. goodalli** Mill. A West Indian species occurring in hot-
houses where it has been introduced in the soil with plants.
Found by Mr. Pearson at Chilwell, feeding on the bulbs of
Eucharis.]

[**O. clavulus** Fér. ? Many specimens probably of this species,
a native of Mauritius, were found by Mr. C. T. Musson, in
March 1884, in an orchid house on Bluebell Hill, Notting-
ham, where it occurred plentifully in moss (*Sphagnum*)
around Orchids.]

AZECA Leach.

A. tridens Pult. Highfield House, several specimens found
by Mr. A. S. H. Lowe (*Lowe*, 1853). Pleasley Vale, a few
specimens found on the Notts. side, 1878 (*R. A. Rolfe* and
Musson): found in same locality in 1883 and 1884 by C. T.
Musson. Creswell Crags, 20. viii. 1881 (*Pickard*).

var. *crystallina* Dup. Pleasley Vale, 10. iv. 1884 (*Musson*).

ZUA Leach.

Z. lubrica Müll. Common throughout the county in damp
places amongst moss and dead leaves in fields, hedgerows
and woods; also on old walls.

var. *lubricoides* Fér. Wollaton, in woods amongst moss, leaves,
etc. 1. iv. 1880; Colwick, March 1880; Thrumpton;

Widmerpool; Beauvale, 11. xi. 1883; Pleasley Vale, Oct. 1878; Creswell Crags, 14. iv. 1884 (*Musson*).

var. *viridula* Jeffr. Mansfield, 1882 (*Pickard*). Creswell Crags, 14. iv. 1884 (*Musson*).

CAECILIOIDES Fér.

C. acicula Müll. Ratcliffe [upon Soar?] amongst moss, Rev. J. Peach (*Lowe*, 1853). Highfield House; Attenborough; Tollerton (*Lowe* and *Musson*, 1879). Colwick Wood, 23. iii. 1880; Attenborough, on a piece of drift-wood on Trent-bank, 19. iv. 1884; Tollerton, plentiful in rejectamenta of a stream, 6. iii. 1880; Gunthorpe, among rejectamenta of R. Trent; Carlton-on-Trent, plentiful in rejectamenta of R. Trent, April 1883; Beauvale, 19. iv. 1884 (*Musson*). Scarthing Moor; Grassthorpe and Darlton, in rejectamenta (*Gain*). Pleasley Vale and Creswell Crags, 1881 (*Pickard*).

SUCCINEA Drap.

S. putris L. Common on reeds on river banks, pond and canal sides, on mud, etc., and widely distributed in Notts.

var. *subglobosa* Pasc. Barton (*Dodd*). Marnham, among rejectamenta (*Gain*).

var. *vitrea* Moq. Thrumpton and Lenton (*Lowe* and *Musson*). Wollaton; Attenborough; Zouch Mills, 8. ix. 1884 (*Musson*). Kirkby-in-Ashfield, on edges of brick ponds, 1881 (*Pickard*). East Drayton (*Gain*).

var. *virescens* Morel. On flags by the Trent, Attenborough (*Dodd*).

var. *solidula* Jeffr. Marnham (*Gain*).

S. elegans Risso. Not uncommon. Beeston; near Highfield House; Radford; Wollaton; Bulwell; Stanton-on-the-Wolds (*Lowe*, 1853). Bank of Grantham canal, Nottingham; Lenton and Radford, on flags by canal side; Gotham, in rejectamenta of Fairham Brook; Stanton-on-the-Wolds; Bingham; Carlton-on-Trent, in rejectamenta of river; Darlton, among wet grass; Clumber and Thoresby, on reeds by the lakes (*Musson*). Pleasley Vale and Creswell Crags (*Pickard*).

var. *pfeifferi* Rossm. Marnham (*Gain*).

var. *virescens* Morel. On flags by the Trent, Attenborough (*Dodd*).

var. *ochracea* Betta. 'Notts.' (*A. Loydell*, 1883).

BASOMMATOPHORA.

CARYCHIUM Müll.

- C. minimum** Müll. Under stones, logs, amongst twigs and leaves in damp shady places: common and generally distributed.

ANCYLUS Geoffr.

- A. fluviatilis** Müll. Common on stones in running water. Tolerably abundant in clear dykes at Highfield House, Attenborough, Bulwell and Oxtun, and at the mouth of a well at Newstead Abbey; in the Trent at Beeston, rare (*Lowe*). Nottingham, on stones of canal wall, and on stones in River Trent near Trent Bridge; dyke and canal at Radford; stream at Lenton; Wollaton, in canal and adjoining stream; Beeston and Thrumpton, in River Trent; canal at Gamston; River Greet, Southwell; River Devon, Newark; River Maun, Edwinstowe; Clumber Lake (*Musson*). Dover Beck, Epperstone (*Carr*). Kirkby-in-Ashfield, 6. viii. 1888 (*Mellors*). Mansfield (*Pickard*). Tuxford; Elkesley (*Gain*).
 var. *capuloides* Jan. Tottle Brook (*Lowe* and *Musson*).
 var. *albida* Jeffr. On stones in stream from the spring at Bulwell (*Musson*). Tuxford, Dec. 1883 (*Gain*).

ACROLOXUS Beck.

- A. lacustris** L. In ponds on water-lilies and other aquatic plants. Pond at Beeston Rylands, rare; exceedingly plentiful on water-lilies in the sheet of water at Radford Grove, the largest specimens $3\frac{1}{4}$ lines long and 2 lines broad (*Lowe*, 1853). Trent Pool and canal at Nottingham, rare; Bramcote, in pond near the Hemlock Stone; Attenborough, numerous on leaves and stems of water-lilies in pond; Upper Broughton, 2. ix. 1884; pond at Clumber, on water-lily leaves (*Musson*). Pond at Rufford, common; Tuxford and Scarthing Moor (*Gain*). Carlton-on-Trent, on reeds in old ballast hole (*Gain* and *Musson*).
 var. *albida* Jeffr. Pond at Attenborough, with type, numerous on leaves and stems of water-lilies; Clumber Lake, one specimen (*Musson*).

LIMNAEA Lam.

- L. stagnalis** L. Distributed throughout the county in canals, ponds and dykes.

- var. *fragilis* L. Canal at Lenton and Radford (*Musson*).
Marnham, abundant; near Bawtry (*Gain*).
- Monst. *scalariforme*. Normanton-on-Trent (*E. Dufty*, 1886).
- L. palustris** Müll. Generally distributed in situations similar to the last species.
- var. *tincta* Jeffr. Found sparingly at Lenton and Beeston (*Lowe*, 1853).
- var. *corvus* Gmel. Newark (*C. E. Wright*).
- var. *elongata* Moq. Nottingham Meadows; Beeston (*Dodd*).
Pond in brickyards at Mapperley, Nottingham; Bulwell Bogs (*Musson*). Near Bawtry (*Gain*).
- var. *lacunosa* Ziegl. Nottingham Meadows (*Gain*).
- L. truncatula** Müll. Common and generally distributed.
- var. *minor* Jeffr. Mapperley, pond in brickyard; Bulwell Bogs (*Musson*). Beeston (*Dodd*). Carlton-on-Trent, in rejectamenta (*Gain*).
- var. *elegans* Jeffr. Beeston (*Lowe* and *Musson*, 1879).
- var. *major* Moq. Near Darlton (*Dodd*).
- var. *ventricosa* Moq. Carlton-on-Trent, rejectamenta (*Gain*).
- var. *oblonga* Puton. River Trent, Beeston, on mud above water-level (*Musson*, 19. iv. 1884).
- L. peregra** Müll. Universally distributed and very common in rivers, canals, ditches, ponds, etc.
- var. *ovata* Drap. Almost as common and widely distributed as the type form.
- var. *acuminata* Jeffr. Ditch at Thrumpton, 10. x. 1878 (*Musson*). Lake at Creswell Crags (*Gain*).
- var. *oblonga* Jeffr. Ditch at Lenton (*Musson*).
- var. *labiosa* Jeffr. Bulwell; Normanton; Rufford (*Dodd*).
Marnham (*Gain*).
- var. *intermedia* Fér. Elkesley; East Drayton Mill (*Gain*, 1885).
- var. *lutea* Mont. Winthorpe, abundant on the banks of the Trent (*Rev. Revett Sheppard*, *Trans. Linn. Soc.*, xiv. p. 169, 1825).
- L. auricularia** L. Widely distributed but not very common. Canals at Nottingham, Radford, Wollaton, Beeston, etc. Pond near Trent Bridge, Nottingham, 19. ix. 1913; R. Trent, Barton Ferry, Attenborough, 23. ix. 1913 (*Welch*). Lake at Tollerton; canal at Hickling, 2. ix. 1884; River Devon, Newark, plentiful, 3. x. 1884 (*Musson*). Retford,

in canal, 4. iii. 1886 (*E. Dufty*). Near Bawtry (*Gain*). Canal at Worksop; Clumber Lake (*Musson* and *Gain*). "I have . . . fine varieties from the stream between Langford Fleet and the River Trent, Notts.—in one of which the inside is purplish; in the other of a delicate silvery white, and the margin is considerably dilated" (*Rev. R. Sheppard, Trans. Linn. Soc.*, xiv. p. 168, 1825).

var. *acuta* Jeffr. In the lake at Highfield House, Beeston (*Lowe*, 1853).

L. glabra Müll. "One specimen only has been found in this neighbourhood; it was dredged in the River Leen at Bulwell, a very singular locality" (*E. J. Lowe, Conch. Nottm.*, 1853, p. 146). Rare: Bulwell, Beeston and Lenton (*Lowe, Allen's Handbook*, 1866, p. 122). Not seen by any other collector.

AMPHIPEPLEA Nils.

A. glutinosa Müll. "Has only been found in one locality, a still sheet of water near the Trent, above the Beeston Ryelands, where it is occasionally plentiful. twenty or thirty specimens having been taken in one day" (*Lowe*, 1853). Rare, at Beeston Lock, in a back-water of Trent (*Lowe*, 1866). Obtained by E. J. Lowe from a pond between Beeston and Attenborough (*Dodd*).

PHYSA Drap.

P. fontinalis L. Common throughout the county in rivers, canals, ponds, etc.

var. *oblonga* Jeffr. Abundant in the River Trent at Beeston and Attenborough, rare in a brook at Oxtou Bogs, in the canal at Lenton, and in a ditch between Beeston and Attenborough (*Lowe*, 1851). Nottingham Meadows (*Dodd*). Trent Pool, Nottingham, with type, one $9 \times 5\frac{3}{4}$ mm. (*Musson*, 1884).

var. *curta* Jeffr. Beeston Meadows (*Lowe* and *Musson*, 1879).

var. *inflata* Moq. Lenton (*Lowe* and *Musson*).

APLEXA Flem.

A. hypnorum L. Abundant in a dyke at Beeston, and rare in a ditch near the Beeston railway station (*Lowe*, 1851). Nottingham Meadows (*Lowe*, 1866). Plentiful at Beeston in ditches and ponds (*Lowe* and *Musson*, 1879). Beeston Ryelands; ditch at Wilford; Lenton meadows; Worksop

(Dodd). Nottingham, small, in dyke at Lady Bay bridge, very plentiful, 1880. This dyke dries up in the summer: in 1883 it was dry for months: in January 1884 the dyke was full of water again and *A. hypnorum* present, though but sparingly; Nottingham, dyke in the Meadows, 14. iii. 1885; ditch near Trent Bridge; ditch at Wilford, March 1884; dyke at Lenton, plentiful in 1877 and 1878, none in 1883; Beeston, pond near the Trent, plentiful in 1878, none in 1883; ditch near the railway station at Beeston, 1883 (*Musson*). River Trent, Marnham, 1885 (*Gain*).

PLANORBIS Geoffr.

P. corneus L. Widely distributed and often common, in canals, ponds and ditches. Very abundant in brooks at Lenton, Beeston, Bulwell, Attenborough, etc. (*Lowe*, 1851). "In a muddy brook at . . . Beeston, into which a constant supply of warm water is discharged, this species grows to a large size, being an inch and a line in diameter" (*Lowe, Conch. Nottm.*, 1853, p. 125). Canal at Nottingham and dykes in Nottingham Meadows, plentiful; pool by river near Trent Bridge, Nottingham; canals at Lenton, Radford and Beeston; dyke at Attenborough; Southwell (*Musson*). Averham near Newark, Feb. 1883 (*Captain Becher*). Marnham; near Bawtry (*Gain*).

P. albus Müll. Widely distributed and plentiful in some localities. Lake at Highfield House; River Trent near Beeston; brooks at Radford and Oxtun; Wollaton; Bulwell (*Lowe*). Pools and canals at Nottingham; Mapperley; canal at Lenton, Radford and Gamston; dykes, etc., at Beeston and Attenborough; lake at Tollerton; canal at Hickling; ponds, etc., at Bulwell and Bestwood; River Devon, Newark; Thoresby Lake, plentiful, 5. viii. 1882; pond near upper end of lake at Clumber, plentiful on under-sides of water-lily leaves and among weeds, 1883 (*Musson*). Southwell (*Captain Becher*). Canal at Worksop and Shireoaks (*Rev. H. Friend* and *C. T. Musson*). Kirkby-in-Ashfield, in brick-ponds, July 1881; flood dykes and ponds near Mansfield, 1884 (*Pickard*). Barton Ferry, Attenborough, 23. ix. 1913 (*Welch*).

P. glaber Jeffr. Rare. Beeston, very rare (*Lowe*, 1866). Beeston and Mapperley, in ponds (*Lowe* and *Musson*, 1879). Thoresby and Clumber Lakes (*Musson*). Creswell Crags, in rejectamenta, a few, 1881 (*Pickard*).

P. crista L. Widely distributed and common in places. Lake at Highfield House, and in a marl-pit at Stanton-on-

the-Wolds : in neither place abundant (*Lowe*, 1853). Trent Pool, near Midland Railway bridge over river, plentiful, April 1884 (still common there, 23. ix. 1913!); canals at Nottingham and Radford; ponds at Mapperley and Thorneywood, Nottingham, exceedingly plentiful in some, 1884; dyke at Bulwell, plentiful in 1874, rare in 1878, none in 1883; Bramcote, plentiful in pond near the Hemlock Stone, Aug. 1883; pond at Upper Broughton, 2. ix. 1884; pond between Mansfield and Pleasley, 10. iv. 1884; Clumber, in pond near upper end of lake, 1883; Carlton-on-Trent, in rejectamenta, 23. iv. 1883 (*Musson*). Pond in the Meadows at Southwell, Aug. 1884 (*Captain Becher*). Common at Tuxford; Askham (*Gain*). Creswell Crags, 1881 (*Pickard*).

var. *cristata* L. Bulwell, with type, numerous, 1874; pond near top of Thorneywood Lane, Nottingham, one, with type; Tuxford (*Musson*, April 1884).

P. carinatus Müll. Occurs in all parts of the county and is often common. Very abundant in brooks at Lenton, Beeston, Bulwell and Attenborough, in the Trent at Beeston, and in Nottingham Meadows (*Lowe*, 1851). Nottingham, in Trent Pool, dykes in the Meadows and elsewhere, and in canal at London Road; Lenton, common in canal; canal at Gamston; Wollaton and Bulwell, in ponds; Attenborough and Beeston, in dykes, etc.; dyke at Bingham; Southwell, River Greet, and pond in the Meadows; Carlton-on-Trent; canal at Worksop, 14. iv. 1884; old fish-pond at Felley Abbey, Sept. 1884 (*Musson*). Marnham; Bawtry (*Gain*). Canal at Worksop and Shireoaks (*Rev. H. Friend*). Creswell Crags (*Pickard*, 1881; *R. Welch*, 1913).

var. *disciformis* Jeffr. Nottingham, canal on London Road, Aug. 1883 (*Musson*). Canal at Beeston, Aug. 1893 (*A. G. Stubbs*). Canal at Newark (*Gain*).

P. umbilicatus Müll. Common in canals, ditches, ponds, etc., throughout the Nottingham district. Especially abundant in dykes in the Nottingham Meadows, and of large size—up to 17 mm. diam.; Lenton; Beeston; Attenborough; Bulwell; Gamston; Gotham; Bingham; Hickling; Zouch Mills; Rolleston; Southwell; Newark; Carlton-on-Trent; Clumber Lake; etc. (*Musson*). Creswell Crags (*Pickard*). Mattersey, June 1910 (*W. F. Brady*). Marnham; near Bawtry, common (*Gain*).

var. *rhombea* Turt. Nottingham Meadows; Lenton; Bawtry (*Dodd*).

P. vortex L. Common throughout the county. Several specimens from Attenborough were 11 mm. in diameter (*Musson*).

- var. *compressa* Mich. Stanton-on-the-Wolds (*Lowe and Musson*, 1879). Trent Pool, Nottingham, one, with type (*Musson*). Southwell, 21. vi. 1884 (*Capt. Becher*).
- P. spirorbis** L. Generally distributed and common. A specimen found by Mr. Gain at Tuxford was 'shaped like *Pyramidula rotundata*' (*J. W. Taylor*).
- P. contortus** L. Rather local, but often plentiful where found. Common in the Nottingham district, especially in ditches in the Meadows, at Colwick, Radford, Beeston, Barton, Attenborough, Bulwell, etc., but some of these localities are now destroyed by drainage; Gamston; R. Greet, Southwell; R. Devon, Newark; Clumber Lake; Thoresby Lake, plentiful, 5. viii. 1882 (*Musson*). Carlton-on-Trent (*Gain and Musson*). Mansfield, flood dykes (*Pickard*). Mattersey, May 1910 (*W. E. Brady*). River in Edwinstowe village, 25. ix. 1913 (*Welch*).
- P. fontanus** Lightf. Widely distributed, but not generally common. Rare in the lake at Highfield House and in a pond at Wollaton; a sheet of water at Radford; canal at Lenton and Nottingham (*Lowe*). Trent Pool, Nottingham, plentiful (still there in Sept. 1913, *R. Welch*); ponds at Mapperley, plentiful; canal at Nottingham and Lenton, rare; in a dyke at Bulwell, rare; Brancote, pond near the Hemlock Stone, plentiful and fine, Aug. 1883; Carlton-on-Trent, 28. iv. 1883; Thoresby Lake, several large specimens, 1882 (*Musson*). Clumber, pond near upper end of lake (*Pickard, Musson and Gain*). Creswell Crags (*Pickard*). Bawtry (*Dodd*).

SEGMENTINA Flem.

- S. nitida** Müll. Rare. Highfield House lake, and brook at Oxtou Bogs (*Lowe, Midland Nat.*, Aug. 1879, ii. 198). Mattersey, May 1910 (*W. E. Brady, teste Taylor*).

PROSOBRANCHIATA.

VIVIPARA Mont.

- V. contecta** Mill. Gravel Drain near Wroot, a single dead but fresh example found floating at the exact point of junction of the boundaries of the counties of York, Lincoln and Nottingham, 14. iv. 1883 (*W. Denison Roebuck*). In a dyke on the Notts. side of the River Idle near Bawtry, April 1886, in tolerable abundance: 50 specimens were collected! (*Gain and Musson*).

- V. vivipara** L. In rivers and canals, common in places. Abundant in the River Soar at Thrumpton and in the canal near Beeston; also in the Trent at Beeston Rylands and below the Nottingham bridge, and the canal and a ditch at Lenton; in the old canal at Wollaton (*Lowe*, 1853). Canals at Nottingham, Lenton, Radford, Wollaton, Gamston and Worksop, usually in plenty; River Devon, Newark; River Trent, Carlton-on-Trent and Marnham, common (*Musson*).
 var. *efasciata* Pick. (*unicolor* Jeffr.). Wollaton canal (*Dodd*).

PALUDESTRINA D'Orb.

- P. jenkinsi** Smith. Overflow from Wollaton canal, between Ilkeston Road and the Saw-mills, common, 1914: first found in 1910 (*W. D. Varney*).

BITHYNIA Gray.

- B. tentaculata** L. Common throughout the county in ponds, ditches, canals and rivers. E. J. Lowe remarks (*Conch. Nottm.*, 1853, p. 41) that in a ditch close to the canal near Lenton Priory, "it occurs in such vast numbers that it is surprising they have room to live and move about, for stones in the water may be found covered six, eight, or ten deep."
 var. *ventricosa* Menke. Canal at Lenton (*Musson*). River Trent, Beeston, 1893 (*A. G. Stubbs*).
 var. *excavata* Jeffr. Canal at Worksop (*Musson*).
 var. *albida* Rimm. Carlton-on-Trent, in rejectamenta of River Trent, 23. iv. 1883 (*Musson*). Ditch at Beeston, 1893 (*A. G. Stubbs*).
 var. *producta* Menke. Nottingham Meadows; Bulwell; Beeston, in a pond; Thoresby Lake (*Musson*). Canal at Beeston, 1893 (*A. G. Stubbs*). Clumber (*Gain*).
 var. *major* Loc. Ditches close to River Trent near Nottingham, 19 by 10 mm. (*Rev. H. Milnes*, 1892). Ditch at Beeston, 15 mm., 1893 (*A. G. Stubbs*).
B. leachii Shepp. Occurs in similar situations to the last species and is as widely distributed but much less common. Abundant in ditch near the railway at Lenton, but only for a distance of about 20 yards; Nottingham Meadows; ditch between Beeston and Attenborough, rare (*Lowe*, 1853). Canal at Nottingham, Lenton and Wollaton, rare; Attenborough, rare; pond in Southwell Meadows, Aug. 1884; River Devon, Newark, common, Oct. 1884; Carlton-on-Trent, rejectamenta; Clumber Lake, rare; canal at Work-

sop, very plentiful, 14. iv. 1884; canal and River Idle, Retford; Bawtry (*Musson*). Beeston Rylands, several, largest 6·5 mm. long, 20. vi. 1874 (*Dodd*). Beeston, 1893 (*Stubbs*). Hoveringham, 18. viii. 1892 (*C. Oldham*). Marnham (*Gain*). Mattersey, June 1910 (*W. F. Brady*).

VALVATA Müll.

V. piscinalis Müll. Canals, rivers, lakes, ponds and ditches; common throughout the county.

var. *depressa* C. Pfeiff. Nottingham Meadows; Clumber Lake; Bawtry; etc. (*Musson*). Creswell Crags, in rejectamenta (*Pickard*).

var. *albina* Tayl. Trent Pool, Nottingham; Clumber Lake (*Musson*). Radcliffe-on-Trent, 1896 (*A. G. Stubbs*).

var. *acuminata* Jeffr. Radcliffe-on-Trent, 1896 (*A. G. Stubbs*).

var. *subcylindrica* Jeffr. Canal, and Trent Pool, Nottingham; Clumber Lake; Carlton-on-Trent, in rejectamenta, 28. iv. 1883 (*Musson*). Creswell Crags, rejectamenta (*Pickard*).

Monst. *sinistrorsum*. In rejectamenta at Creswell Crags, two specimens with type, 1881 (*Pickard*).

V. cristata Müll. Much more local than the last, but plentiful where found. Abundant in a brook at Bulwell Bogs; River Leen at Bulwell, not plentiful; brook near the Trent between Beeston and Attenborough, rare; sparingly in a muddy dyke below Beeston; tolerably abundant in a small stream at Radford Grove (*Lowe*, 1853). Canal on London Road, and in Trent Pool, Nottingham: Bulwell; Beeston, numerous; Attenborough, plentiful; dyke at Bingham; River Devon, Newark; Carlton-on-Trent, common in rejectamenta of River Trent, 28. iv. 1883; Clumber Lake; Thoresby Lake, plentiful (*Musson*). Grantham and Lenton canals, Nottingham, on caddis-cases, 1887 (*A. Marshall*). Hoveringham, 18. viii. 1892 (*C. Oldham*). River Idle, Gamston Bridge near Retford, on caddis-case (*Gain*). Mansfield, in rejectamenta of flood-dykes; Creswell Crags, rejectamenta (*Pickard*).

ACICULA Hartm.

A. lineata Drap. Creswell Crags, in rejectamenta of stream, 1881 (*Pickard*).

NERITINA Lam.

N. fluviatilis L. On submerged stones in rivers and canals: local, but often common where it occurs. Abundant in the

Trent near Beeston Rylands; River Soar at Thrumpton; canal near Beeston; canal between Lenton and Radford; dredged from the Trent below the bridge at Nottingham (*Lowe, Conch. Nottm.*, 1853, where a long account of this species is given). Very plentiful on the stones forming the wall of the canal at Nottingham, 21. iii. 1880; Wollaton, abundant in the canal; canal and dyke at Radford; in the Trent at Beeston; Grantham canal near Gamston; canal at Hickling, 2. ix. 1884; River Devon, Newark, 3. x. 1884; in the river at Elkesley (*Musson*). Canal, Beeston, Aug. 1893 (*Stubbs*). Common in the Chesterfield canal at Worksop (*Rev. H. Friend, Gain and Musson*). River Trent at Meering (*J. Hawkins*).

var. *nigrescens* Colb. 'River Trent' (*Dodd*).

PELECYPODA.

EULAMELLIBRANCHIA.

UNIO Retz.

U. tumidus Phil. Locally common. River Trent near Beeston, Beeston canal, and River Soar at Thrumpton: abundant in each locality (*Lowe, Conch. Nottm.*, 1853). For interesting remarks on the colour and environment of this and other freshwater molluscs, see pp. 33 and 158 of that work). Canals at Nottingham, Radford, Wollaton, Gamston and Hickling; River Soar near Zouch Mills; River Devon, Newark; River Trent, Marnham (*Musson, etc.*).

var. *radiata* Colb. Not uncommon in the Beeston canal, in the Trent, and in the canal at Wollaton (*Lowe*, 1866). Canals at Wollaton and Gamston; River Soar, Zouch Mills; River Trent, Marnham; with the type form in each case (*Musson*).

var. *ovalis* Mont. Lake at Highfield House, and in the River Trent at Beeston (*Lowe*, 1851). Not uncommon (*Musson*).

U. pictorum L. Lakes, canals and rivers, locally abundant. Common in the lake at Highfield House, the River Trent at Beeston, the River Soar at Thrumpton, a sheet of water at Wollaton, and the canal near Beeston (*Lowe*). Canals at Nottingham, Wollaton, Gamston and Hickling; River Soar near Zouch Mills (*Musson*). River Trent at Marnham; lake at Ossington (*Gain and Musson*). Near Bawtry (*Gain*).

Some of the specimens obtained by Messrs. Gain and Musson from the lake at Ossington were of great size, the

largest measuring $5\frac{3}{16}$ inches in length, and many more than 5 inches. When this lake was drained for clearing out the mud in 1884 Mr. Gain noticed that the mussels (*Unio* and *Anodonta*) occurred almost entirely in a zone from six to ten feet wide, beginning at about four feet from the shore. This zone was closely packed with specimens of all sizes: a few lay close to the edge, and a few others were scattered for a couple of yards beyond the packed zone, but the whole of the middle of the lake was destitute of the shells.

Mr. Musson states that on March 1. 1884, among hundreds of specimens of *Unio pictorum* and *Anodonta anatina* thrown on to the canal bank at Gamston during a recent cleaning-out of the canal, a very careful search failed to reveal a single specimen that was not broken at the posterior end. From the marks of teeth on the shells he attributes the damage to rats.

var. *radiata* Moq. Lake at Highfield House (*Lowe*). River Trent, Marnham (*Musson*). Wollaton canal; River Soar; etc. (*Dodd*).

var. *curvirostris* Norm. Highfield House lake (*Lowe*).

ANODONTA Lam.

A. cygnaea L. Lakes, canals and sluggish rivers, common. Lake at Highfield House; mill-dams at Bulwell; canals at Lenton and Beeston; River Trent; River Soar; sheets of water at Radford Grove, Cinder Hill and Basford (*Lowe*). River Trent, Holme near Newark (*Rev. Revett Sheppard, Trans. Linn. Soc.*, 1822, xiii. 85). Canals at Nottingham, Wollaton, Gamston and Hickling; lake at Tollerton; mill-dam, Sutton-in-Ashfield (*Musson*). Lakes at Clumber and Ossington; River Trent, Marnham (*Gain* and *Musson*). Rufford Lake (*Gain*). Colwick Park lake; Rivers Leen and Erewash (*Carnell*).

In 1884 Mr Musson took from the mill-dam at Sutton-in-Ashfield some 300 specimens of *A. cygnaea*, 150 of which measured more than $6\frac{1}{4}$ inches. One specimen was $7\frac{1}{8}$ inches, two others 7 inches, 30 between $6\frac{3}{4}$ and 7 inches, and 50 or 60 between $6\frac{1}{2}$ and $6\frac{3}{4}$ inches. In the lake at Ossington also Messrs. Musson and Gain obtained large specimens—up to $6\frac{5}{8}$ inches in length.

var. *zellersis* Gmel. Abundant in the lake at Highfield House and in the Trent near Beeston (*Lowe*, 1851). Clumber Lake:

always found in the tail of the lake, and not with the type, which occurs in the lake proper; mill-dam at Sutton-in-Ashfield (*Musson*).

var. *incrassata* Shepp. River Trent at Holme, near Newark (*Rev. Revett Sheppard, Trans. Linn. Soc.*, 1822, xiii. 85). Ossington Lake; Clumber Lake (*Gain and Musson*).

var. *rostrata* Kok. Canal, Beeston (*Lowe*, 1866).

var. *radiata* Müll. Canals, Wollaton and Gamston; River Soar, Zouch Mills; River Trent, Marnham (*Musson*). Ossington Lake (*E. Dufty*).

A. anatina L. Abundant in the lake at Highfield House, a stream and canal at Lenton, and the Rivers Trent and Soar (*Lowe*, 1851). Wollaton, in canal (*Musson and Carr*). Canal at Gamston; mill-dam, Sutton-in-Ashfield (*Musson*). River Trent, Marnham (*Gain and Musson*).

var. *radiata* Jeffr. In the Trent at Marnham (*Musson*).

SPHAERIUM Scop.

S. rivicola Leach. Common in slow rivers and canals. Rather abundant in the Trent near Beeston and in the Soar at Thrumpton; canal at Beeston (*Lowe*, 1851-3). Canals at Nottingham, Wollaton, Gamston (abundant), Hickling and Zouch Mills; River Trent, Beeston and Marnham; River Soar, Zouch Mills; River Devon, Newark; canal, Worksop (*Musson*). Beeston canal, Aug. 1893 (*Stubbs*). Canal, Retford (*Gain*).

S. corneum L. Common throughout the county in rivers, canals, ponds and ditches.

var. *nucleus* Stud. Beeston (*Lowe and Musson*).

var. *vittata* Garn. River Trent at Marnham Ferry (*Gain*, July 1894).

var. *flavescens* Macg. Beeston (*Lowe*). Clumber Lake (*Gain and Musson*). Chesterfield canal, Worksop, 10. viii. 1885 (*Rev. H. Friend*).

Mr. Musson states that at Clumber Lake all the specimens appeared to belong to this variety. They were found by thousands in masses adhering to the walls of the pit at the outlet of the lake. This pit receives all the debris of the lake, acting as a sort of filter, and is periodically cleaned out. His visit took place on one of these occasions.

var. *pisidioides* Gray. Canal at Beeston (*Lowe*, 1886). River Devon, Newark (*Musson*).

S. lacustre Müll. Ponds, canals, etc., rather local, but often abundant where found. Very abundant in a brook at Beeston and another at Highfield House (*Lowe*, 1851). Very fine and abundant in three ponds at top of Thorneywood Lane, Nottingham, 1883; Lenton, canal, and ditch in Trent Lane, amongst *S. corneum*; ponds at Beeston, Attenborough, Bramcote and Barton; old fishpond at Felley Abbey, Sept. 1884; Mansfield; Creswell Crags; ponds at Ossington, Askham, and Drayton Mill (*Musson*). Clumber Lake (*J. G. Jeffreys*). Egmantion (*Gain*).

var. *ryckholtii* Norm. Nottingham; River Devon, Newark; Tuxford (*Musson* and *Gain*).

var. *brochoniana* Bourg. Found in Clumber Lake by Mr. J. G. Jeffreys, and at Highfield House by myself (*Lowe*, 1866). Thorneywood Lane, Nottingham, 1883; River Devon, Newark, plentiful, Oct. 1884; Clumber, pond near the lake, abundant, 1883, determined by Dr. J. G. Jeffreys (*Musson*). Clumber Lake, 1885 (*Gain*, etc.). River Trent, Marnham, very fine (*E. Dufty*).

S. pallidum Gray. Rare in the Trent at Beeston (*Lowe*, 1866). Canal, Leen-side, Nottingham, one specimen (*Dodd*, 1881). Marnham, 1886. Requires confirmation.

PISIDIUM Pfeiff.

P. amnicum Müll. Rivers and canals, widely distributed and not uncommon. Dredged abundantly from the Trent at Beeston Rylands (*Lowe*, 1853). Canals at Nottingham, Gamston, Lenton, Beeston, Kinoulton, Hickling and Work-sop; Fairham Brook, Gotham (rejectamenta); River Trent, Beeston; River Devon, Newark, plentiful and large; River Maun, Haughton Chapel near Tuxford; River Idle, Retford (*Musson*). Barton Ferry, Attenborough, 23. ix. 1913 (*R. Welch*). Weston and Darlton (*Gain*). River Trent, Marnham (*E. Dufty*).

P. cinereum Alder. (*P. casertanum* Poli). Rare. Clumber Lake (*J. G. Jeffreys*). Lenton and Beeston (*Lowe*). Fairham Brook; Clumber Lake, determined by Jeffreys (*Musson*).

P. nitidum Jen. Clumber Lake (*J. G. Jeffreys*). Nottingham Meadows, Beeston, etc., not common (*Lowe*, 1866). Nottingham canal; Attenborough, in ditch by roadside—both determined by Dr. Jeffreys; Mansfield; etc. (*Musson*).

var. *splendens* Moq. Mansfield, rejectamenta of flood-dykes, several, 1881 (*Pickard*).

- P. pusillum** (Gmel.) Jen. Ponds, ditches, canals, etc. Generally distributed and common. Brooks, ditches, and River Trent, Beeston; Bulwell (*Lowe*, 1853). Nottingham Meadows; canal under Nottingham Castle; ditches at Lenton, Radford and Barton; Bulwell bogs; ponds at Attenborough, Wollaton, Bramcote and Widmerpool; Southwell, plentiful; Carlton-on-Trent, rejectamenta of River Trent; Kirkby-in-Ashfield, stream in wood, 1. x. 1885; Clumber Lake, plentiful; Welbeck; etc. (*Musson* and *others*). Hoveringham (*C. Oldham*). Tuxford; Markham Moor, East Markham; Collingham; River Idle, Retford; canal at Worksop; etc. (*Gain*). Finningley, common in roadside ditches, 14. iv. 1883 (*Roebuck*).
- P. milium** Held. Canals and ponds, not common. Nottingham (*Gain*, 1885, and *C. E. Wright*, April 1899). Attenborough (*Musson*). Hoveringham, 18. viii. 1892 (*C. Oldham*). Pond at Mansfield (*Pickard* and *Musson*). Clumber (*Gain*).
- var. *alpestris* Clessin. Mansfield: determined by Clessin himself.
- P. pulchellum** Jen. Rare. Dyke at Beeston and Stanton-on-the-Wolds (*Lowe*). Beeston Rylands, 28. vi. 1874 (*A. Marshall*). Beeston Cut, 13. viii. 1892, numerous (*C. Oldham*). Thoresby Lake, with *P. fontinale*, 5. viii. 1882 (*Musson*: seen and confirmed by Dr. J. Gwyn Jeffreys and Mr. J. W. Taylor).
- P. fontinale** Drap. Ponds and canals, not common. Canal at Nottingham and Radford, Aug. 1883; Bulwell, pond in the bogs; Attenborough, pond; brook at Highfield House, Beeston, Oct. 1883; Thoresby Lake, 5. viii. 1882 (*Musson*). Nottingham (*A. Marshall*, Nov. 1887). Weston (*Gain*).
- Mr. Musson's specimens from Bulwell, Attenborough and Thoresby were determined by Dr. J. Gwyn Jeffreys: all the others by Messrs. Taylor and Roebuck.
- var. *pallida* Jeffr. Clumber Lake, numerous, 1883 (*Musson*).
- P. subtruncatum** Malm. Nottingham, canal; Hoveringham; Chas. Oldham (*Woodward*, *Cat. Brit. Pisid. in Brit. Mus.*, 1913, p. 89).
- P. henslowanum** Shepp. Various places near Nottingham: several sent to Messrs. Taylor and Roebuck by A. Marshall, 15. xi. 1887. River Trent, Wilford, several, 25. x. 1884; River Devon, Newark, numerous, Oct. 1884 (*Musson*). Canal at Retford and at Worksop (*Gain*, Aug. 1889).

P. obtusale (Lam.?) Jen. Rare. In a drain near Beeston railway station (*Lowe*, 1853). Near Nottingham, one specimen sent to Messrs. Taylor and Roebuck by A. Marshall, 15. xi. 1887. Pond at Attenborough, with *P. pusillum* (*Musson*, teste *Jeffreys*, *Taylor* and *Roebuck*).

DREISSENA V. Ben.

D. polymorpha Pall. In sluggish rivers, canals and lakes, locally common. 'In an old mill-dam at Toton, Notts., and at the overflow of a pond at Lenton, Nottingham; found eight years ago at Toton' (*Geo. Woolley, Zoologist*, Aug. 1846, iv. 1420). 'Very common and large in the lake at Highfield House, common in the canal at Lenton (where it is small), the River Soar at Thrumpton, and a pool at Wollaton, and in few numbers in the River Trent near Beeston' (*Lowe*, 1851). 'The largest specimen dredged from the lake at Highfield House measures $1\frac{1}{16}$ by $1\frac{1}{16}$ inches. Four specimens which were found clinging to a stone in the lake have not left it for two years; during this period they increased greatly in size. At Hooley's Wood, Wollaton, in the old canal I last summer found myriads of *Dreissena polymorpha* clinging together on the sides of the lock in clusters some inches thick. They were of good size, and some specimens were pale and striped with blue' (*Lowe*, 1853). Canals at Nottingham, Radford, Wollaton, Gamston and Hickling; River Soar, Zouch Mills; River Trent, Marnham (*Musson*).

ARTHROPODA.

THIS great branch of the animal kingdom includes a vast assemblage of forms whose bilaterally symmetrical bodies are composed of a number of divisions or segments placed one behind the other and more or less covered with a hardened external skeleton. Some or all of the segments carry paired jointed appendages, variously modified to act as feelers, jaws, or organs of locomotion.

The principal Classes in the Phylum are :—

Class I. CRUSTACEA.

„ II. MYRIAPODA.

„ III. HEXAPODA or INSECTA.

„ IV. ARACHNIDA.

CRUSTACEA.

The Crustacea are almost all aquatic animals, breathing by means of gills, and bearing typically biramous or two-branched appendages.

In the Sub-class *Malacostraca*, to which belong the Crayfishes, Lobsters, Crabs, freshwater Shrimps, Woodlice, etc., the body consists of 20 segments bearing 19 pairs of appendages. The segments of the head and some or all of the thoracic segments are fused together and covered dorsally and laterally by a shield or carapace.

The members of the Order *Decapoda* have the whole of the head and thorax covered by the carapace; they possess five pairs of walking legs, thoracic gills, and a pair of compound eyes borne on movable stalks.

The *Amphipoda* have a laterally-compressed body and a small carapace extending backwards over, usually, only one thoracic segment; the eyes are sessile, and the gills are attached to the thoracic legs.

The *Isopoda* are distinguishable from the Amphipods by the dorso-ventral flattening of the body, and by the gills being situated on the abdominal instead of the thoracic limbs.

The Sub-class *Entomostraca* comprises small Crustacea which vary considerably in the number of their body segments and the character of the appendages. A simple median eye may be present in addition to a pair of compound eyes.

The *Branchiopoda* include forms with flattened, leaf-like, swimming appendages, and almost always with both lateral and median eyes. A large carapace is often present. The great majority inhabit fresh water.

The *Copepoda* have no carapace and only a simple median eye, the compound lateral eyes being absent except in the small Sub-order *Branchiura*.

The *Ostracoda* comprise forms in which the body consists of only about eight segments and is completely enclosed in a carapace which has the form of a bivalve shell. Paired eyes may be present or absent. They inhabit both fresh and salt water.

MALACOSTRACA.

DECAPODA.

POTAMOBIOUS Leach.

P. pallipes Lereb. This species, the common river Crayfish, is fairly common in the River Maun and mill dams at Mansfield, and also in a stream in Shireoaks Park near Worksop.

AMPHIPODA.

GAMMARUS Fab.

G. pulex L. Everywhere abundant in streams and ponds.

ISOPODA.

ONISCIDAE.

TRICHONISCUS Brandt.

T. pusillus Brandt. This tiny claret-brown coloured species is very common under stones, decaying logs, amongst moss, etc., in damp places. I have found it more or less abundantly at Basford, Cinder Hill, Wollaton, Kimberley,

near Bulwell Wood Hall, Oxton Bogs, Kirkby-in-Ashfield, Mansfield, Warsop, Eakring Brail Wood, Nether Langwith, Creswell Craggs, Worksop and Shireoaks.

ONISCUS L.

- O. asellus** L. This is our commonest species, and is everywhere abundant under flower pots in gardens, under stones, logs, bark of fallen trees, etc.

PHILOSCIA Latr.

- P. muscorum** Scop. Common under stones and logs everywhere around Nottingham; also about Mansfield, Worksop, in Sherwood Forest, etc.

PLATYARTHURUS Brandt.

- P. hoffmannseggii** Brandt. This curious little Woodlouse differs from the other British species in being quite destitute of eyes. It is pure white in colour, and lives in ants' nests. I have found it commonly in nests under stones in quarries throughout the Magnesian Limestone district, *e.g.*, near Bulwell Wood Hall, Kirkby-in-Ashfield, Mansfield, Teversall, Pleasley Vale, Warsop, Creswell Craggs, and Worksop; also in Wollaton brickyard, Lowdham, Bleasby, Fiskerton (on the Trent bank), West Leake, Kingston-upon-Soar, and Wysall. The ants with which it associates are *Lasius niger*, *L. flavus*, and *Myrmica rubra*.

PORCELLIO Latr.

- P. scaber** Latr. Very common under stones and flower pots in Nottingham gardens; also under stones and logs, under bark of dead trees, etc., throughout the county. The usual colour is a greyish slate, but a yellowish or reddish brown variety is not uncommon.

- P. dilatatus** Brandt. Chilwell, in greenhouse (*C. E. Pearson*).

METOPONORTHUS Budde-Lund.

- M. pruinosis** Brandt. I took this species in numbers under a log in a garden at Sherwood Rise, Nottingham, 22. vi. 1902. Mr. C. E. Pearson has also found it at Lowdham or Chilwell.

ARMADILLIDIUM Brandt.

A. vulgare Latr. Common. Nottingham, Kimberley, quarry near Bulwell Wood Hall, Oxtun, Bilsthorpe, Mansfield, Mansfield Woodhouse, Warsop, Pleasley Vale, Creswell Craggs, Worksop, Wysall, etc.

This species when disturbed instantly rolls itself into a perfect ball of the size and colour of a black, or rather blue, pill: hence the name "Pill-woodlouse" commonly applied to it. Varieties of a brown or yellowish-brown colour are not uncommon. It appears to be less exclusively nocturnal than other species; I frequently see it running on roads and paths during the day, often in bright sunshine.

ASELLIDAE.

ASELLUS Geoffr.

A. aquaticus L. Common throughout the county in streams and ponds.

ENTOMOSTRACA.

The members of this group have been almost entirely neglected in Nottinghamshire, and only a few casual references to these interesting animals exist, so that it is quite impossible to give any satisfactory account of them here. Of the numerous species that doubtless exist in our rivers, ponds and ditches only the following have been satisfactorily determined, all of which occur more or less commonly in the neighbourhood of Nottingham:—

Ceriodaphnia reticulata Jur.

Simocephalus vetulus O. F. Müll.

Daphnia pulex De Geer, and *D. magna* Straus.

Euryceerus lamellatus O. F. Müll.

Acroperus harpae Baird.

Chydorus sphaericus O. F. Müll.

All the above belong to the Order BRANCHIOPODA and Sub-order CLADOCERA. The next three genera belong to the Order COPEPODA:—

Diaptomus gracilis Sars.

Cyclops spp.

Canthocamptus minutus O. F. Müll.

To the Sub-order BRANCHIUURA belongs the curious fish-parasite, *Argulus foliaceus* L., which I have obtained in numbers from Bream taken from the Trent at Nottingham.

Of the Order OSTRACODA the following species have been identified :—

Cyclocypris laevis O. F. Müll.

Cypris incongruens Ramd.

Herpetocypris reptans Baird.

Pionocypris vidua O. F. Müll.

Ilyocypris sp.

MYRIAPODA.

This Class includes the Centipedes and Millipedes. They are terrestrial animals found under stones and logs lying on the ground, under the loose bark of dead trees, among dead leaves and in damp earth, etc. The head is distinct, provided with a single pair of antennae and two or three pairs of jaws. The body is not distinguishable into thorax and abdomen, but consists of a number of similar segments or rings, each of which is enclosed in an exoskeleton of chitin and bears either one or two pairs of jointed appendages. Myriapods breathe by means of *tracheae* or branching air tubes, opening to the exterior by pores or *stigmata*. The sexes are separate.

The Class is divisible into two principal Orders, (i) the Chilopoda and (ii) the Chilognatha or Diplopoda.

The CHILOPODA or Centipedes are active, swiftly-running forms and prey upon living animals such as insects, worms, etc. They have flattened bodies with only one pair of legs to each segment of the body. The first pair of legs are formidable *poison claws*, large curved claws which are used for seizing and killing the prey. The number of body segments is very various, ranging from fifteen to considerably over a hundred. The antennae are long, and the last pair of legs are always longer than the other pairs. Some Centipedes (*e.g.*, *Geophilus* spp.) are phosphorescent.

The CHILOGNATHA or Millipedes have cylindrical bodies and the chitinous exoskeleton contains much lime. The antennae are short and more or less club-shaped, and each segment or body ring, with the exception of the first three, bears two pairs of legs; these are shorter than in the Centipedes and are all of nearly equal length.

The Millipedes are slow-moving, retiring creatures, living on a vegetable diet, and sometimes doing considerable damage in gardens.

I am indebted to Dr. Randell Jackson for the identification of the species in the following list; a few specimens whose identity was doubtful were submitted by him to Mr. Ellingsen of Kragero, Norway.

*CHILOPODA.**LITHOBIIDAE.***LITHOBIUS** Leach.

- L. forficatus** L. The large brown centipede common everywhere under stones in gardens and fields, and beneath logs and fallen branches in woods. Abundant in Nottingham and the surrounding district; also about Mansfield, Worksop, Sherwood Forest, etc.
- L. variegatus** Leach. Common, I believe, although decidedly less so than the last species and not found in gardens. I have specimens from Grives Wood Quarry, Kirkby-in-Ashfield, and from Pleasley Vale.
- L. melanops** Newp. Sherwood Forest, June 1912, both sexes (*Jackson and Carr*).
- L. calcaratus** C. L. Koch. Pleasley Vale, 1. ix. 1903. Sherwood Forest, several of both sexes, June 1912 (*Jackson*).
- L. crassipes** L. Koch. Kingston-upon-Soar, Feb. 1903. Sherwood Forest, both sexes, June 1912 (*Jackson and Carr*).

*SCOLOPENDRIDAE.***CRYPTOPS** Leach.

- C. hortensis** Leach. Wollaton, 18. ix. 1903.

*GEOPHILIDAE.***GEOPHILUS** Leach.

- G. longicornis** Leach. Nottingham and district; Pleasley Vale.
- G. carpophagus** Leach. Nottingham and district; Pleasley Vale; Sherwood Forest; Barrow Hills, Everton.
- G. truncorum** Bergs. and Mein. Sherwood Forest, both sexes, June 1912 (*Jackson*).

SCOLIOPLANES Bergs. and Mein.

- S. acuminatus** Leach. Mansfield stone quarries, 11. viii. 1903.

*DIPLOPODA.**POLYXENIDAE.***POLYXENUS** Latr.

- P. lagurus** L. Beeston; South Leverton (*Thornley*). Cottam; Worksop, in old quarries. Usually found beneath loose bark of old palings or dead tree trunks.

*GLOMERIDAE.***GLOMERIS** Latr.

- G. marginata** Vill. The "pill-millipede," so called from its habit of rolling up into a little ball when disturbed. It has a close superficial resemblance to the common "pill-woodlouse," from which, however, it may be readily distinguished by the narrow white band bordering each segment of the body on the upper surface. Not uncommon under stones and logs in hedgebanks and woods. Bagthorpe, Nottingham; Bulwell Wood; Aspley and Beauvale Woods; Linby; Eakring Brail Wood; Elkesley; quarries at Warsop, Creswell Crags and Worksop.

*POLYDESMIDAE.***BRACHYDESMUS** Heller.

- B. superus** Latz. Arnold near Nottingham, 15. iii. 1904.

POLYDESMUS Latr.

- P. complanatus** L. Common under rotten logs, etc., in many places about Nottingham, in Sherwood Forest, and doubtless throughout the county.
- P. gallicus** Latz. Bulwell Wood near Nottingham, 27. iii. 1903.
- P. coriaceus** Porat. Cinder Hill brickyard, both sexes, 5. vii. 1902.

*CHORDEUMIDAE.***ATRACTOSOMA** Fanz.

- A. polydesmoides** Leach. Nottingham, in deep rock-cellar; Sutton near Granby, several of both sexes under stones, 31. viii. 1903; quarry by Bulwell Wood Hall, 27. iii. 1903;

Mansfield Woodhouse, under stones in quarry, 27. xii. 1902;
Pleasley Vale, under stones, 1. ix. 1903.

IULIDAE.

ISOBATES Menge.

- I. varicornis** Koch. I took a ♀ of this little-known British species at Arnold near Nottingham, 24. x. 1903.

BLANIULUS Gerv.

- B. guttulatus** Bosc. Basford, Nottingham, ♀, 12. ii. 1903.
B. fuscus Am Stein. Sherwood Forest near Edwinstowe, several females, 19. xi. 1910. Taken also by Dr. Jackson in same locality in June 1912.

IULUS Brandt.

- I. albipes** Koch. Basford, Nottingham, both sexes, 12. ii. 1903; quarry by Bulwell Wood Hall, several of both sexes under old stump, 27. iii. 1903; Sherwood Forest.
I. fallax Mein. Basford, Nottingham; near Bulwell Wood Hall; Feb. and March 1903.
I. londinensis Leach (var. *teutonicus* Poc.). Bagthorpe, Nottingham, 8. xi. 1902; Arnold; Cinder Hill brickyard, 5. vii. 1902; Bulwell Wood and quarry by Bulwell Wood Hall, 27. iii. 1903.
I. silvarum Mein. Arnold near Nottingham, both sexes, Oct. and Nov. 1902; Bulwell Wood; Pleasley Vale. Taken by Dr. Jackson in Sherwood Forest, June 1912.

The species of *Iulus* are known locally as "wire-worms," and are said to be very injurious to cultivated crops.

HEXAPODA or INSECTA.

Insects are segmented animals with the body-segments grouped into three clearly defined regions, the head, thorax and abdomen. The head is externally unsegmented and usually carries four pairs of appendages, the antennae, the mandibles, and two pairs of maxillae: it also possesses eyes of two kinds, simple and compound. The thorax consists of three segments, each provided with a pair of jointed legs, and the two hinder ones each usually bear a pair of wings. Many of the more primitive insects are, however, wingless, and in most groups there are wingless species. The abdomen generally consists of ten segments which are—at least in the adult condition and with rare exceptions—destitute of appendages. The body is covered by a jointed chitinous cuticle which is periodically cast off and renewed during the growth of the insect.

Insects are air-breathing Arthropods, the organs of respiration taking the form of branching air-tubes or tracheae which open on the surface of the body by a series of paired spiracles and convey air to all parts of the body. The nervous system and sense-organs are highly developed. The sexes are separate.

The young insect is always wingless, and often unlike the parent in other respects, the attainment of the adult form generally involving a more or less profound transformation or metamorphosis. The vast majority of insects are terrestrial or aerial, but many are aquatic in the larval condition. They form by far the largest class of existing animals, exceeding in number of species all other terrestrial animals combined. Many groups are remarkable for their high intelligence, which often expresses itself in the formation of organized communities for mutual support and protection.

The Class Hexapoda is divided into three main groups or Sub-classes, (1) *Apterygota*, (2) *Exopterygota*, (3) *Endopterygota*, each containing a number of Orders.

APTERYGOTA.

The insects belonging to this group are small, soft-bodied, wingless creatures with no metamorphosis, and exhibiting throughout life a general resemblance to the larval stage of many insects of higher groups. The apterous condition is probably primitive, *i.e.*, the ancestors of these insects were also wingless.

Some have large antennae, and while all possess the three pairs of thoracic legs characteristic of insects in general, some have in addition short limb-like abdominal appendages and a pair of long bristle-like processes at the hind end of the body. Many are provided with a pair of abdominal appendages modified into a springing or leaping apparatus, while others possess on the under side of the first abdominal segment a peculiar structure of doubtful function, the ventral tube. In some the body is covered with a hairy down, and others are thickly clothed with scales very similar to those of Lepidoptera. The Sub-class comprises the two Orders *Thysanura* (Bristle-tails) and *Collembola* (Spring-tails).

THYSANURA.

The Thysanura have the abdomen divided into ten segments some of which bear short, paired, limb-like appendages, while the last segment has a pair of processes or *cerci* which are generally long, slender, many-jointed and antenna-like, but in one family form a pair of forceps somewhat like those of earwigs. A single median tail appendage, similar to the cerci, occurs in some forms.

Of the five recorded British species of Thysanura four have been found in Nottinghamshire: the remaining species, *Machilis maritima*, is confined to the coast, where it occurs under stones at and above high-water mark.

CAMPODEA Westw.

C. staphylinus Westw. This tiny white fragile insect, suggesting a minute Myriapod in appearance and movements, is found very frequently under stones and logs and among damp loose soil in gardens and fields in Nottingham and many other localities in the county.

LEPISMA Linn.

L. saccharina Linn. The active little 'silver fish' found commonly in kitchens and bakehouses in Nottingham and throughout the county. It is one of the most familiar of household pests.

THERMOBIA Bergr.

T. domestica Pack. West Bridgford, Nottingham, Nov. 1904, in abundance among cinders under fire-grates in a dwelling-house.

MACHILIS Latr.

M. polypoda Linn. Common under stones in quarries throughout the whole of the Magnesian Limestone district.

COLLEMBOLA.

The Collembola have only six abdominal segments, the first of these bearing a ventral tube or papilla from which in some species a pair of delicate tubes or vesicles can be protruded. The function of this ventral tube is disputed; it may perhaps enable the insect to adhere to smooth vertical surfaces. The 'spring' or jumping mechanism is situated on the under side of the fourth or fifth segment of the abdomen, and consists of a basal median piece bearing two free limbs. When not in use the spring lies parallel with the body with the limbs or prongs pointing forward and, in some genera at least, is kept in place by a 'catch' situated on the third abdominal segment. When the catch is released the elastic spring suddenly extends so that the limbs now point backward, and the insect is thus shot into the air. Besides this mode of progression by successive rapid leaps, many of the Collembola can run actively. In some Springtails the body is clothed with hairs, in others with flattened scales. The colour varies considerably, some species being pure white, others black, while various bright and often metallic tints occur, and some species are beautifully variegated. They occur abundantly under bark, rotten wood, stones, among moss and foliage, in damp earth, etc. Some inhabit the surface of stagnant water, and a few are confined to the sea-shore. Their food appears to consist chiefly of decaying vegetable matter, but some are apparently injurious to the roots and other parts of cultivated plants. They are not at all intolerant of cold, many species occurring in both North and South Polar regions, where they are often common on the snow and ice.

There are three families of Collembola: (1) *Poduridae*, (2) *Entomobryidae*, (3) *Sminthuridae*. The first two agree in having the abdomen elongate with the six segments usually well marked, and the antennae inserted on the front of the head. The Poduridae, however, have the cuticle granulated, without scales, and the spring (when present) is carried on the fourth abdominal segment; while the Entomobryidae have a smooth cuticle, with or without scales, and a usually well-developed spring which is apparently connected with the fifth abdominal segment. The Sminthuridae have the abdomen sub-globular or ovoid with the segments mostly fused together, and the antennae are inserted far back on the head.

The following species, all collected by the writer, have been identified by Professor G. H. Carpenter of Dublin, but many more still remain undetermined and cannot therefore be included in this list.

PODURIDAE.

ACHORUTES Templ.

- A. armatus** Nic. Clifton Grove, on rotten wood, 21. vii. 1910.
- A. longispinus** Tullb. Strelley.
- A. viaticus** L. Abundant under a board in garden at Bramcote.

NEANURA Macg.

- N. muscorum** Templ. Mapperley Park, Nottingham; Basford.

ONYCHIURUS Gerv.

- O. ambulans** L. Bramcote, abundant under board in garden; Nottingham, in garden, 10. xii. 1908.
- O. inermis** Tullb. Bramcote, under board in garden.

ENTOMOBRYIDAE.

FOLSOMIA Willem.

- F. fimetaria** L. Nottingham, under flower-pots in garden.

ISOTOMA Bourl. (Börn.)

- I. sensibilis** Tullb. Kingston-upon-Soar.
- I. viridis** Bourl. A very common species. Nottingham, Basford, Arnold, Bulwell, Bulwell Wood, Bestwood Park, Strelley, Nuthall, Linby, Papplewick, Oxtun Bogs, Lowdham, Widmerpool, Cropwell Bishop, Creswell Crags, etc.

ISOTOMURUS Börn.

- I. palustris** Müll. Nottingham; Daybrook; Bestwood Park; Arnold; Oxtun Bogs; Strelley; Burton Joyce, common under stones by edge of R. Trent.

TOMOCERUS Nic.

T. minor Lubb. Very common. Nottingham; Arnold; Bulwell; Papplewick; Linby; Strelley; Oxtun Bogs; Ploughman Wood, Lowdham; Bramcote; Wollaton; Mansfield; Creswell Crags; Burton Joyce; Widmerpool; Kingston-upon-Soar.

T. vulgaris Tullb. Bulwell Wood.

ORCHESELLA Templ.

O. cincta L. Very common and generally distributed.

var. *vaga* L. Kingston-upon-Soar.

O. rufescens L. Sherwood Forest near Edwinstowe, July 1912: these specimens represent the vars. *pallida* and *melanocephala*.

O. villosa Geoffr. South Leverton (*Thornley*). Arnold; Kimberley; Bulwell Wood; Bramcote; Grives Wood, Kirkby-in-Ashfield.

ENTOMOBRYA Rond.

E. albocincta Templ. Bulwell brickyard; Kingston-upon-Soar.

E. multifasciata Tullb. South Leverton (*Thornley*). Colwick Wood; Bulwell Forest; Bestwood Park; Kimberley; Bramcote; Mansfield.

E. muscorum Nic. Nottingham; Daybrook; Arnold; Nuthall; Oxtun Bogs; Cropwell Bishop.

E. nicoleti Lubb. Nottingham; Kingston-upon-Soar; Cropwell Bishop.

E. nivalis L. Arnold; Strelley; Nuthall; Papplewick; Bulwell Wood; Burton Joyce; Ploughman Wood, Lowdham; Oxtun Bogs; Cropwell Bishop; Kingston-upon-Soar.

LEPIDOCYRTUS Bourl.

L. cyaneus Tullb. Arnold; Strelley; Oxtun Bogs.

L. curvicollis Bourl. Nottingham, in cellar of house.

L. lanuginosus Gmel. Nottingham; Arnold; Bulwell Wood; Nuthall; Oxtun Bogs; Ploughman Wood, Lowdham; Burton Joyce; Widmerpool.

*SMINTHURIDAE.***SMINTHURUS** Börn.

- S. viridis** L. Ollerton, Sherwood Forest, very abundant on *Lotus corniculatus* and other low herbage by road to Budby, July 1903; Strelley; Oxtun Bogs; Trent-side, Attenborough, Aug. 1911.

BOURLETIELLA Banks.

- B. hortensis** Fitch. Rufford, 1913.

ALLACMA Börn.

- A. fusca** L. Clifton Grove, on fallen branches, 8. ix. 1910; Sherwood Forest near Edwinstowe, July 1912.

DICYRTOMA Bourl.

- D. fusca** L. (= *cursor* Lubb.). Wollaton, under chips and boards in timber yard, 19. iv. 1904; Lowdham.

DICYRTOMINA Börn.

- D. minuta** Fab. Arnold; Strelley; Oxtun Bogs, under bits of detached bark; Ploughman Wood, etc., Lowdham.
- D. ornata** Nic. Arnold; Strelley; Oxtun Bogs; Colston Bassett.

EXOPTERYGOTA.

The insects in this division are winged, or if wingless this condition is clearly due to degradation; the wing rudiments develop outside the body. There are no locomotor abdominal appendages. The degree of metamorphosis varies, the young being sometimes similar to, sometimes unlike, the parents.

DERMAPTERA (Earwigs).

Insects with biting jaws. In the winged forms the forewings are small stiff elytra, the hind wings membranous and delicate, folding longitudinally by a series of fan-like radial folds, and then into four by two transverse folds; this enables them to

be tucked away under the small elytra. Many Earwigs, however, are wingless. The unjointed forceps at the hind end of the body are very characteristic, occurring in no other insects with the exception of one genus of the Thysanura. There is no metamorphosis, the young resembling the parents.

The Order includes the single Family *Forficulidae*, and of the few British species only two have been found in Nottinghamshire. One, the common Earwig (*Forficula auricularia*), is strictly nocturnal in its habits, and is both vegetarian and carnivorous in its diet. It is remarkable that although possessed of most beautiful and elaborate wings it apparently rarely or never uses them. The other and smaller species, *Labia minor*, on the other hand, may often be seen flying freely in the day time.

LABIA Leach.

L. minor L. South Leverton (*Thornley*). Sturton-le-Steeple (*E. Shaw*). Nottingham; Normanton-on-the-Wolds, 13. viii. 1914. Probably common but overlooked.

FORFICULA L.

F. auricularia L. Abundant everywhere. I have frequently seen it swarming on patches of 'sugar' prepared for the delectation of nocturnal Lepidoptera.

ORTHOPTERA.

Insects with biting jaws. The wings are usually well developed and have a complex reticulate venation. The front pair are of firm texture, and when at rest one overlaps the other, so that their hinder borders do not meet to form a straight suture as they do, for example, in the beetles. The hind wings are delicate and membranous, folding like a fan beneath the anterior pair; they alone are used for flight, but the Orthoptera as a rule do not fly much, preferring rather to use their powerful legs which enable many species to leap great distances or to run with extreme rapidity. Some species, however, such as the migratory locusts, have quite exceptional powers of flight. Tail-appendages or 'cerci' are always present, and the females have a well-developed ovipositor. The young closely resemble the parents, except that the wings are only fully developed in the adult. Some species are wingless.

The insects belonging to this Order are grouped under three Sub-orders:—

1. PHASMODEA, which includes a single Family, the *Phasmidae*, or Stick and Leaf-insects, none of which are British.
2. OOTHECARIA, Orthoptera whose eggs are enclosed in a common capsule. This division comprises two Families:—(i). *Mantidae* (Praying insects), not represented in the British Isles: (ii). *Blattidae* (Cockroaches), distinguished by their flattened oval body with large prothorax covering and almost concealing the head, and legs adapted for swift running.
3. SALTATORIA, comprising three Families: (i). *Acridiidae* (Grasshoppers and Locusts), (ii). *Locustidae* (Green Grasshoppers), (iii). *Gryllidae* (Crickets)—all with very long and powerful hind legs adapted for leaping, and all possessing stridulating organs which produce shrill chirping sounds.

The *Acridiidae* have short antennae and the ovipositor of the female is short, scarcely if at all projecting beyond the end of the abdomen. The *Locustidae*, on the other hand, have very long slender antennae, often longer than the body, and the female has a long flattened and sword-like ovipositor. The *Gryllidae* resemble the two preceding families in possessing long slender antennae and (except in the Mole Crickets) a long ovipositor; they differ however in the character of the forewings which are folded longitudinally in such a way that the inner or posterior part lies flat on the back, while the outer or anterior part is bent at right angles on to the side of the body. Many species however are wingless. The cerci are unjointed, and often very long.

The Orthoptera are not well represented in Nottinghamshire, and many of those that do occur are not native, all our local *Blattidae* for instance having been introduced by human agency. The truly British species of Cockroaches, belonging to the genus *Ectobia*, are only three in number, and none of these have been found in Nottinghamshire. They are relatively small insects occurring among dry leaves and moss and about the undergrowth in woods. The other species, including those which occur with us, attach themselves to human habitations, greenhouses, and other places where artificial warmth is provided; of these the common cockroach or "black beetle," found only too abundantly in kitchens and bakehouses, is the most familiar; but several other species occur, having been introduced with vegetable produce, etc., from abroad. The Grasshoppers (*Acridiidae*) are also well-known insects, both on account of their jumping

powers and their cheerful chirping notes; we possess most of the common species. Three species of the migratory locusts (*Pachytylus danicus*, *Acridium aegyptium*, and *Schistocerca peregrina*) have occurred in the county, the last-named apparently as a voluntary immigrant, the two former as mere casuals, imported with fruit. The Locustidae and Gryllidae are poorly represented in Nottinghamshire, only three species of the former and one of the latter family having as yet been found.

We are indebted to Dr. Malcolm Burr for valuable assistance in determining many species of Nottinghamshire Orthoptera.

OOTHECARIA.

BLATTIDAE.

BLATELLA Caud. (*Phyllodromia* Serv.).

B. germanica L. Abundant in the Rock Valley Mustard Mills, Mansfield, in 1906 (*Daws*). Abundant in the golf pavilion, Bulwell Forest, Sept. 1909.

BLATTA L.

B. orientalis L. A common pest in houses.

PERIPLANETA Burm.

P. americana L. Worksop (*Houghton*). A number found in railway trucks at Newstead station, 20. ii. 1905 (*Daws*).

P. australasiae Fab. Mansfield, 1907-8 (*Daws*). In green-houses at Wiseton (*E. Shaw*).

[The following species are casuals, introduced with fruit (bananas, etc.):—

Panchlora exoleta Burm. (?). Frequently found among bananas in fruit shops and market stalls at Nottingham, Mansfield, Worksop, etc.

P. viridis Burm. Nottingham Market-place.

Nyctibora holosericea. On a fruit stall in Mansfield Market-place, Feb. 1907 and April 1908 (*Daws*).

Stylopyga rhombifolia Stoll. Worksop (*Houghton*).]

SALTATORIA.

ACRIDIIDAE.

OMOCESTUS Bol.

- O. viridulus** L. Edwinstowe and Osberton, Sherwood Forest (*E. Shaw*). Langford Moor (*Carr*). Cinder-hill near Nottingham (*F. M. Robinson*). Kingston-upon-Soar (*Thornley*).

STAURODERUS Bol.

- S. bicolor** Charp. Common. Nottingham; Gotham; Langford Moor; Thorney (*Carr*). Mansfield (*Daws*). Retford; North and South Leverton; Cottam; Rampton; Clarbrough (*Thornley and Shaw*). Barrow Hills, Everton; Kingston-upon-Soar (*Thornley*).

CHORTHIPPUS Fieb.

- C. parallelus** Zett. Retford; Treswell Wood; Clarbrough; Cottam (*Thornley and Shaw*). Thorney (*Carr*). Kingston-upon-Soar (*Thornley*).

GOMPHOCERUS Thunb.

- G. maculatus** Thunb. Barrow Hills, Everton (*Thornley*). Wheatley near Retford (*Chamberlin*). Sherwood Forest near Edwinstowe; Langford Moor near Newark (*Carr*). Mansfield (*Daws*).

[The following species are accidental importations or casual visitors:

Pachytylus danicus L. (= *cinerascens* Fab.). Mansfield, Sept. 1880 and Aug. 1882; also two others without dates (*Daws*).

Acridium aegyptium L. Single specimens of this, the largest of the European Acridiidae, were captured in Nottingham Market-place in 1902 and 1912.

Schistocerca peregrina Oliv. This North African locust visited England in 1869, and was taken in many English counties including Nottinghamshire (*Roebeck, Naturalist*, 1876-7, p. 129).]

TETTIX Charp.

- T. bipunctatus** L. Retford (*S. Pegler*). Linby; Burton Joyce (*Carr*). Doubtless common and generally distributed.

LOCUSTIDAE.

LEPTOPHYES Fieb.

- L. punctatissima** Bosc. North Leverton (*E. Shaw*). South Leverton and Treswell Wood (*Thornley*). Colston Bassett.

MECONEMA Serv.

- M. varium** Fab. Widely distributed and frequent. Aspley Woods, Nottingham; Epperstone Park (*Carr*). Mansfield (*Daws*). Treswell Wood; East Park Wood, Laxton (*Thornley*).

OLYNTHOSCELIS F. de Wald. (*Thamnotrizon* Fisch).

- O. griseo-aptera** De G. (*cinereus* L.). Thorney, several specimens, August 15-19, 1913 (*L. A. Carr*).

GRYLLIDAE.

GRYLLUS L.

- G. domesticus** L. Nottingham, Retford, and doubtless elsewhere.

PLECOPTERA.

In the insects of this Order the forewings are similar in texture to the hind wings, both being membranous with very numerous nervures; the anterior pair are usually long and narrow, and lie flat on the back, one overlapping the other; the posterior pair are much the larger and are folded fan-wise in repose. The antennae are long, the legs widely separated, and the abdomen often bears a pair of long jointed cerci. The metamorphosis is slight, the young resembling the parents, except that they are without wings and are aquatic in habit, breathing through the skin or by thoracic tracheal gills. The larvae are carnivorous, feeding on the soft aquatic larvae of other insects, and are commonly found under stones in clear swiftly-running streams; hence they are not very common in Nottinghamshire, where such conditions are rare.

The Order contains only a single Family, the *Perlidae* or Stone-flies. Of the thirty British species only thirteen have been taken in the county; these have all been identified by Mr. Kenneth J. Morton, to whom we are greatly indebted for much kind assistance in this and other Orders.

PERLIDAE.

PERLA Geoffr.

- P. cephalotes** Curt. There are two ♀ specimens in the Nottingham Natural History Museum labelled "Nottingham," but I have no further knowledge of its occurrence.

CHLOROPERLA Newm.

- C. grammatica** Poda. Sherwood Forest near Ollerton, July 1912; marshy ground near Newbound Mill, Teversall, 26. vi. 1913; by the Trent at Nottingham, 26. v. 1913.
- C. venosa** Klapálek. This species, first definitely described and figured as a British insect by Mr. Kenneth J. Morton in the *Entomologist* (vol. 46, pp. 73-77, 1913) is very abundant by the River Trent at Nottingham, Wilford, Clifton, Adbolton, Radcliffe, etc., in May and June; it has also been taken at Stoke Bardolph and East Bridgford by F. M. Robinson, and at Kelham and Besthorpe near Newark by J. W. Saunt and myself. Further search will probably show that it is generally distributed and common along the Trent in Nottinghamshire. It appears to take the place of *C. grammatica*, which is rare on the Trent.

TAENIOPTERYX Pict.

- T. nebulosa** L. Radcliffe-on-Trent, by the river, 7. iii. 1913; Burton Joyce, fairly common by the Trent, 12. iii. 1913 (*F. M. Robinson*). Burton Joyce and Gunthorpe, fairly common on dead sedges on river bank, 20. ii. 1914.

NEMOURA Latr.

- N. meyeri** Pict. South Leverton (*Thornley*).
- N. cinerea** Oliv. Worksop district, 1904 (*Lady Robinson*). Cinderhill brick-yard, 30. vi. 1903.
- N. standfussi** Ris. Aspley Woods near Nottingham, rather common, 18. v.—4. vii. 1912; East and West Leake and West Leake Hills, 27. v. and 14. vi. 1913; marshy ground near Newbound Mill, Teversall, 26. vi. 1913; the Dumbles Kirkby-in-Ashfield, 28. vi. 1913.
- N. variegata** Oliv. North and South Leverton and Treswell Wood (*Thornley* and *Shaw*). Aspley Woods, Nottingham, 28. v. and 16. vii. 1912; East Leake, 27. v. 1913; Crow Wood Hill, West Leake, 14. vi. 1913; Rolleston, 25. vii.

1913; Linby, 20. vii. 1914 (*Carr*). Flawforth near Plumtree, 4. v. 1913 (*Saunt*). Thorney, Aug. 1913 (*L. A. Carr*).

N. marginata Pict. Several specimens taken on marshy ground near Newbound Mill, Teversall, 26. vi. 1913.

N. inconspicua Pict. Sherwood Forest near Ollerton, July 1912; near Newbound Mill, Teversall, 3. viii. 1912 and 26. vi. 1913; Linby, 18. ix. 1912 and 20. vii. 1914; Oxtou Bogs, 24. iv. 1913; Aldercar Wood, Newstead, 13. viii. 1914; Arnold, 14. vi. 1914 (*Carr*). Worksop, 1913 (*Hodding*). Papplewick, 9. x. 1913 and 21. vi. 1914; Bulwell, 22. ix. 1914 (*Robinson*).

LEUCTRA Steph.

L. klapáleki Kemp. In marshy ground near Newbound Mill, Teversall, 3. viii. 1912; by the Trent, Attenborough, 14. viii. 1913.

L. hippopus Kemp. Marshy ground near Newbound Mill, Teversall, rare, 26. vi. 1913.

L. nigra Klap. Several specimens in marshy ground near Newbound Mill, Teversall, 26. vi. 1913.

PSOCOPTERA.

An Order of very small insects with biting mandibles, long and slender antennae, and conspicuous eyes. Wings are usually developed, the forewings being much larger than the hind wings: they are however comparatively rarely used for flight. Cerci are absent. The metamorphosis is slight, chiefly consisting in the absence of wings in the immature state. To this Order belong the familiar "book-lice"—wingless species which often create havoc in neglected libraries and collections of insects.

Only eighteen of the forty-three species recorded for the British Isles have as yet been found in Nottinghamshire; these have been identified for me by Mr. K. J. Morton. Many other species would doubtless be found if systematically searched for.

There is but one Family, the *Psocidae*, with the characters of the Order.

PSOCIDAE.

AMPHIGERONTIA Kolbe.

A. variegata Latr. Common on trunk of sycamore tree in garden at Sherwood, Nottingham; Thorney; both in August 1913.

- A. fasciata** Fab. South Leverton, on oak, 21. vii. 1900 (*Thornley*). Edwinstowe, Sherwood Forest, 12. vi. 1912.
- A. bifasciata** Latr. On hawthorn, Sherwood, Nottingham, 17. vii. 1913; common on trunk of sycamore in garden at Sherwood, Nottingham, 28. vii. to 10. viii. 1913; swept from *Calluna*, Sherwood Forest near Edwinstowe, 25. ix. 1913; Ollerton, June 1914.

PSOCUS Latr.

- P. nebulosus** Steph. Thorney, 15—19. viii. 1913 (*L. A. Carr*).
- P. longicornis** Fab. Thorney, 15—19. viii. 1913 (*L. A. Carr*).

STENOPSOCUS Hagen.

- S. immaculatus** Steph. Aspley Woods near Nottingham; the Dumbles, Kirkby-in-Ashfield; Upton near Southwell, on hawthorn; Normanton-on-the-Wolds and Plumtree, on *Salix*; Thorney; all taken from June 28 to Sept. 3, 1913 (*Carr*). Bulcote Wood, 16. x. 1913 (*F. M. Robinson*).

GRAPHOPSOCUS Kolbe.

- G. cruciatus** L. Common. Aspley and Beauvale Woods, July 1912; Fiskerton; Kingston Park; West Leake Hills; North Collingham; Sherwood Forest near Edwinstowe; Widmerpool; Nottingham; Aldercar Wood, Newstead. All 1913-14, 25. vii. to 25. ix. (*Carr*). Lambley Dumbles and Papplewick, October 3—9, 1913 (*Robinson*).

MESOPSOCUS Kolbe.

- M. unipunctatus** Müll. Aspley Woods near Nottingham; Sherwood Forest near Edwinstowe; both June 1912; Radcliffe-on-Trent; the Dumbles, Kirkby-in-Ashfield; Upton near Southwell; Sherwood, Nottingham. June 21 to August 18, 1913.

PHILOTARSUS Kolbe.

- P. flaviceps** Steph. West Leake Hills, 21. viii. 1913.

ELIPSOCUS Hagen.

- E. westwoodi** McLach. Sherwood, Nottingham, on trunk of sycamore tree in garden; Arnold near Nottingham; Upton

near Southwell; Widmerpool, on *Corylus*; Sherwood Forest near Edwinstowe; Normanton-on-the-Wolds. Taken from July 12 to Sept. 25, 1913-14.

E. abietis Kolbe. Edwinstowe, Sherwood Forest, June 1912; Ollerton, June 1914; Fiskerton, on oak; Arnold, on oak; Epperstone Park, on *Pteris* and on *Castanea*; Kingston Park, on *Salix*; North Collingham, on *Salix*; Thorney. All 1913, July to Sept. Plumtree, 4. viii. 1914 (*Robinson*).

E. cyanops Rost. Arnold near Nottingham, 24. vii. 1913; North Collingham, on hawthorn, 25. viii. 1913.

PTERODELA Kolbe.

P. pedicularia L. Sherwood, Nottingham, common on windows and tables in my study, August 15 to 30, 1913: less common in September.

ECTOPSOCUS McLach.

E. briggsi McLach. Widmerpool, on oak, 18. viii. 1913.

CAECILIUS Curt.

C. flavidus Steph. West Leake Hills, abundant on oak, ash, and beech, 10. viii. 1912, 15—21. viii. 1913; East Leake, 11. viii. 1912; Edwinstowe, Sherwood Forest, 30. viii. 1912; Thorney, Aug. 1913; Widmerpool, on oak, birch and *Salix*, 18. viii. 1913; North Collingham, on ash, 25. viii. 1913; Nottingham, on poplar, 21. ix. 1914.

C. burmeisteri Brauer. Thorney, 15—19. viii. 1913 (*L. A. Carr*).

HYPERETES Kolbe.

H. guestfalicus Kolbe. Among papers in room at University College, Nottingham, 13. xii. 1912.

TROCTES Burm.

T. divinatorius Müll. Among papers in room at University College, Nottingham, 10. ii. 1913.

EPHEMEROPTERA (May-Flies).

These are very delicate insects with atrophied mouth parts, the imago taking no food during its brief life; antennae short and slender; four membranous wings with very close and complex venation, the hinder pair being much smaller than the forewings and sometimes absent; the body bears at its hinder extremity two or three very long thread-like tail-filaments or cerci. The larvae are aquatic and differ greatly in appearance from the perfect insect; an active winged stage, the sub-imago, precedes the imago. The larval life is long, lasting for two or three years; moults are frequent, and the full-grown larva or nymph possesses rudimentary wings; it rises to the surface of the water, the skin splits, and in a few seconds the winged insect emerges and flies away. Soon, however, it settles down and casts off still another skin, disclosing the true imago; this lives for a few hours only, or at the most for a day or two.

There is only a single Family, the *Ephemeridae*, with about forty British species. Of these only eleven have been definitely ascertained to occur in Nottinghamshire; several others have been taken, but owing to the difficulty of identifying the smaller forms they cannot be recorded at present.

*EPHEMERIDAE.***EPHEMERA** L.

- E. vulgata** L. Babworth near Retford, 29. v. 1901; Norton near Warsop, 28. v. 1905 (*Carr*). Canal at Wollaton, 27. v. 1911; Epperstone (*Saunt*). Cotgrave, 27. vi. 1912 (*Robinson*).
- E. danica** Müll. Ollerton, common about the river, 12. vi. 1904; Gonalston, 8. vi. 1901.

EPHEMERELLA Walsh.

- E. ignita** Poda. Nottingham, June 1912.

BAËTIS Leach.

- B. binoculatus** L. Daybrook, Nottingham, 8. iv. 1904.
- B. vernus** Curt. Clifton Grove near Nottingham (*Thornley*).

CENTROPTILUM Eaton.

- C. luteolum** Müll. Cossall, by canal, 16. v. 1905.
C. pennulatum Eaton. Edwinstowe, Sherwood Forest, June 1912 (*L. A. Carr*).

CLOËON Leach.

- C. dipterum** L. North and South Leverton (*Thornley*). Aspley Woods near Nottingham; Ollerton and Edwinstowe; 1912.
C. simile Eaton. Near Retford (*Eaton*). Osberton (*E. Shaw*). Cossall, by canal, 16. v. 1905.

RHITHROGENA Eaton.

- R. semicolorata** Curt. Common at Linby, 4. vii. 1903.

HEPTAGENIA Walsh.

- H. sulphurea** Müll. Common on the Trent: Nottingham, Wilford, Radcliffe, Fiskerton, etc.

ODONATA (*Dragon-Flies*).

The insects of this Order are easily recognised by their large and very mobile head with tiny bristle-like antennae and very large eyes, long and slender abdomen ending in a pair of stiff unjointed cerci, and four wings of nearly equal size which have a transparent glassy appearance and cannot be folded when the insect is at rest: they arise behind the level of the legs and are divided up by numerous veinlets into a multitude of small meshes. The larvae are aquatic and often very unlike the adults: they undergo many moults, and in the later stages possess rudiments of wings, but there is no quiescent pupal stage. Both larvae and perfect insects are carnivorous, and possess powerful jaws. Many Dragon-flies have remarkable powers of flight, and may often be seen, especially in the neighbourhood of water, hawking for their insect prey which they capture and devour while on the wing.

The Dragon-flies are grouped under three Families: (1) *Libellulidae*, (2) *Aeschnidae*, (3) *Agrionidae*. In the species belonging to the first two families the fore and hind wings are somewhat dissimilar, the hind pair being broader at the base;

both pairs are horizontally extended in repose. These insects have a very powerful and rapid flight. The two families are distinguished chiefly by differences in the neururation of the wings. In the Agrionidae the wings are all alike, both pairs being equally narrowed at the base: they are carried vertically and longitudinally in repose. Most species have a slow, fluttering flight.

Only fourteen of the forty British species of Odonata are recorded for Nottinghamshire, but several others doubtless occur.

LIBELLULIDAE.

SYMPETRUM Newm.

- S. striolatum** Charp. Retford; Treswell Wood (*Thornley*).
Langford Moor near Newark, 28. vii. 1912 (*Saunt*).

LIBELLULA L.

- L. depressa** L. South Leverton; Treswell Wood (*Thornley*).
Mansfield district, occurs sparingly every year: taken from
May 12 to June 17 (*Wm. Daws*). Langford Moor; Widmer-
pool.
- L. quadrimaculata** L. North Leverton (*Eland Shaw*).
Mansfield, rare; 10. vii. 1900 (*Daws*).

AESCHNIDAE.

CORDULEGASTER Leach.

- C. annulatus** Latr. Occurs regularly every year at Mansfield;
taken from June to August (*Daws, 1913*).

AESCHNA Fab.

- Ae. juncea** L. Mansfield, 12. viii. 1901, 3. ix. 1903, 8. ix.
1907 (*Daws*).
- Ae. cyanea** Müll. Shireoaks (*Houghton*). South Leverton;
Treswell; Stokeham (*Thornley*). Mansfield, 16 viii. 1901,
5. viii. 1903, 2. ix. 1908 (*Daws*). Owthorpe, 25. viii. 1907
(*Saunt*).
- Ae. grandis** L. Kingston-upon-Soar, several, 27. vii. 1908;
Chilwell (*Thornley*). Occurs every season at Kings Mill
Reservoir, Mansfield; 9. viii. 1901, 24. viii. 1901, 20. viii.
1902, 28. viii. 1902, 4. viii. 1903, 4. ix. 1904 (*Daws*).

AGRIONIDAE.

CALOPTERYX Leach.

C. virgo L. Rainworth Water near Mansfield (*Rev. F. C. R. Jourdain*).

C. splendens Harris. Treswell Wood (*F. Shaw*). On the Trent at Cottam, Rampton and Littleborough near Retford (*Thornley and Carr*). Sometimes abundant on the Trent (*Daws*). Wollaton (*Carr*). Fiskerton, July 1912 (*Saunt*).

PYRRHOSOMA Charp.

P. nymphula Sulz. Shireoaks (*Houghton*). Treswell Wood (*Thornley*). Mansfield, 20. vi. 1898 (*Daws*).

ISCHNURA Charp.

I. elegans Van der L. Rivers, canals, ponds, etc.; common throughout the county.

AGRION Fab.

A. pulchellum Van der L. Saundby (*Fland Shaw*).

A. puella L. Common. Retford; North and South Leverton; Treswell Wood (*Thornley*). Cottam; Saundby (*Shaw*). Ratcliffe-upon-Soar, 10. vi. 1911 (*Saunt*). Mansfield, 11. vi. 1911 (*Daws*). Cossall; Strelley; Trowell; Radcliffe-on-Trent.

ENALLAGMA Charp.

E. cyathigerum Charp. Shireoaks near Worksop; Welbeck Lake, abundant (*Lady Robinson*). Budby, Sherwood Forest, 9. vii. 1903 (*Carr*). Mansfield, 26. vi. 1901 (*Daws*). Owthorpe, 20. vi. 1914 (*Saunt*).

THYSANOPTERA (*Thrips*).

Minute insects with piercing and sucking jaws; both pairs of wings are similar, and are long, narrow, and fringed with hairs: occasionally they are absent. The larvae resemble the parents in form, but the last stage preceding the adult is passive and takes no food.

Thrips suck the juices of plants and often occur in great numbers on leaves and flowers, sometimes doing much damage. About one hundred species are known to occur in the British Isles, but a large proportion of these have only been discovered during the last few years through the researches of Mr. R. S. Bagnall. Practically nothing is known of these insects in Nottinghamshire, and only the two following species, identified by Mr. Bagnall, can be recorded:—

Aeolothrips fasciatus L. Sherwood, Nottingham, ♀, 10. viii. 1913 (*Carr*). Kingston-upon-Soar, ♀, 24. vii. 1914 (*Thornley*).

Physothrips atratus Hal. Very abundant in flowers of *Cichorium intybus* in the Rectory garden at Linby, 24. vii. 1914.

HEMIPTERA.

This Order comprises the bugs, cicads, frog-hoppers, plant-lice, scale-insects, etc., insects of small or moderate size, all of which are characterised by the modification of the mouth parts into a piercing and sucking proboscis or beak ('rostrum') which is bent backwards beneath the thorax when at rest. Two pairs of wings are usually present, and these exhibit important differences in the two main groups into which the order is divided. In the *Heteroptera* the anterior wings (elytra) are more or less horny or leathery except the apical portion which is membranous; they fold flat on the back, one overlapping the other, in repose, covering up the more delicate and entirely membranous hind wings. In the *Homoptera*, on the other hand, the fore wings are of the same consistency throughout, sometimes firmer than the hind wings but often scarcely differing in texture from them; they slope over the back in a roof-like manner when at rest. In this Sub-order, moreover, the face slopes downwards and backwards, thus bringing the rostrum into contact with the basal joints of the fore-legs. The *Heteroptera* are almost without metamorphosis, the young closely resembling the adult except for the absence of wings, which are gradually developed as the insect approaches maturity. Among the *Homoptera*, however, metamorphosis is more marked, the young frequently bearing little resemblance to their parents.

The great majority of the British Hemiaptera are vegetable feeders, living on the juices of plants; a few of the *Heteroptera*,

however, are blood-suckers. Some of the Homoptera have the remarkable habit of enveloping themselves in their earlier stages in a mass of white froth, as in the well-known 'cuckoo-spit' frog-hoppers.

The Heteroptera are divided into two series or tribes: (1) the *Gymnocerata*, characterised by the possession of large and conspicuous antennae. This group comprises all the terrestrial forms as well as the 'pond-skaters' which live on the surface of water, and includes twelve British families of which the *Pentatomidae*, *Lygaeidae*, *Cimicidae* and *Capsidae* are the largest in point of numbers; (2) the *Cryptocerata*, truly aquatic insects with very small antennae which are hidden on the under surface of the head. To this group belong the 'water-scorpions' (*Nepidae*) and the 'water-boatmen' (*Notonectidae*), the latter having the curious habit of swimming on their backs.

Of the nine families of the Homoptera the *Membracidae*, strange and often grotesque looking insects owing to the extraordinary development of the prothorax, are represented in Britain by two species, of which we have one; the *Cercopidae*, which include the familiar frog-hoppers or 'cuckoo-spit' insects, the former name being given to them on account of their frog-like aspect and remarkable leaping powers, comprise seven British species, all of which occur in the county; the *Fulgoridae* and the *Jassidae* are both large families, well represented in Nottinghamshire.

The preceding families of the Homoptera agree in having three segments in the feet or tarsi; the three following families have only two.

The *Psyllidae* are a large family of very small insects with transparent wings and long antennae; they live on various plants, often in great numbers, and are active jumpers.

The *Aphidae* or Plant-lice are minute soft-bodied insects with long antennae and legs and, very often, delicate transparent wings; there is usually a pair of tubular processes on the dorsal surface of the fifth abdominal segment through which a secretion is discharged; the young resemble the parent. The Aphides are remarkable for their extraordinary reproductive powers. Throughout the summer the females reproduce parthenogenetically (*i.e.*, without fertilisation) and viviparously, the progeny being all females; and as these attain maturity and themselves produce offspring in a few days they multiply enormously. In the autumn males as well as females are produced and fertilised eggs are laid which survive the winter and give rise in the spring to parthenogenetic females. Some species of Aphides form galls. Although very numerous in species as well as in individuals

the Aphidae of Nottinghamshire are very little known, and most of our records for this family are due to Lady Robinson of Worksope Manor. It is to be hoped that some local naturalist will take up the study of these interesting and economically important insects.

The *Aleyrodidae* are minute and delicate insects with four rounded, white, mealy wings; they are found on the leaves of various wild and cultivated plants. Some years ago a species of *Aleyrodes* swarmed on strawberries in Nottingham, and the same or a closely allied species was equally abundant on tomatoes at Wellow.

The *Coccidae* or Scale-insects have only one tarsal segment. They are remarkable for the great difference between the sexes. The male has a single pair of wings, and long antennae and cerci; it passes through a passive pupal stage before the final moult. The female is much larger than the male and is wingless; its antennae and legs are degenerate or absent, and it leads a sedentary life on the food plant, covered by a shield-like scale formed of a waxy secretion, cast skins, excrement, etc. Very few species of *Coccidae* have been observed in a wild state in Nottinghamshire, but certain species are common on imported oranges, lemons, bananas, etc.

The most recent Catalogue of the British Hemiptera is that by Messrs. Saunders and Edwards, published in 1908, but it does not include the Aphidae, Aleyrodidae or Coccidae. Of the 800 species enumerated in this Catalogue 343 have been taken in Nottinghamshire, and twelve additional species have recently been found in the county, five of which (*Typhlocyba prunicola*, *T. plebeja*, *T. distincta*, *T. carri*, and *T. diversa*) are new to science and four others (*Megophthalmus scabripennis*, *Acocephalus trifasciatus*, *Deltocephalus multinotatus*, and *Psyllopsis discrepans*) are here recorded for the first time as British. The three remaining species (*Deltocephalus substriatus*, *D. thenii*, and *Typhlocyba frustrator*) have recently been described elsewhere by Mr. J. Edwards. Further research will doubtless add many more species to the county list. We are greatly indebted to Mr. James Edwards, F.E.S., author of *The Hemiptera Homoptera of the British Islands* for his generous and valuable help in identifying our captures: with the exception of a few of the commonest and most easily recognised species the whole of the Nottinghamshire Hemiptera (as restricted in the Catalogue mentioned above) have passed through his hands. Mr. E. A. Butler, F.E.S., had also rendered valuable assistance with the Heteroptera. The few recorded species of *Coccidae* were all identified by Prof. R. Newstead, F.R.S., author of the Ray Society's Monograph on the British *Coccidae*.

HETEROPTERA.

GYMNOCERATA.

PENTATOMIDAE.

SEHIRUS Am S.

- S. bicolor** L. Sherwood Forest (*W. E. Ryles*).

CHLOROCHROA Stal.

- C. juniperina** L. Nottingham (*Ryles*).

PIEZODORUS Fieb.

- P. lituratus** Fab. Sherwood Forest (*Ryles*). Barrow Hills, Everton, on broom, 8. viii. 1904; North Leverton, 11. viii. 1904 (*Rev. T. C. B. Chamberlin*).

PENTATOMA Oliv.

- P. rufipes** L. Treswell Wood, 21—30. vii. 1897; Marnham (*Thornley*). Langford Moor near Newark, several on flowers of *Senecio jacobaea*, 16. viii. 1912; Sherwood Forest, Aug. 1914 (*Carr*). Edwalton, 14. viii. 1914 (*J. W. Saunt*).

PICROMERUS Am S.

- P. bidens** L. Kingston-upon-Soar, Aug. 1905 (*Miss Challans*).

TROILUS Stal.

- T. luridus** Fab. Cuckney Hay Wood, Nether Langwith, one larva, 19. viii. 1912.

ACANTHOSOMA Curt.

- A. haemorrhoidale** L. South Leverton, 10. ix. 1900 (*Thornley*).
A. interstinctum L. Sherwood Forest (*Ryles*).

ELASMOSTETHUS Fieb.

- E. griseus** L. Sherwood Forest, common (*Ryles*). Langford Moor, nymphs very common on birch, 29. vi. 1899 (*Thornley* and *Carr*).

COREIDAE.

MYRMUS Hahn.

- M. miriformis** Fall. Langford Moor, 29. vi. 1899; Gotham, 20. viii. 1914 (*Thornley*). Quarry Banks, Linby, 20. vii. 1914.

BERYTIDAE.

NEIDES Latr.

- N. tipularius** L. Barrow Hills, Everton, one specimen in moss, 16. ix. 1902 (*Thornley*).

BERYTUS Fab.

- B. montivagus** Fieb. Creswell Crags (Notts. side), 22. ix. 1913.

LYGAEIDAE.

NYSIUS Dall.

- N. thymi** Wolff. Beeston, 13. viii. 1914 (*Robinson*).

CYMUS Hahn.

- C. glandicolor** Hahn. Clumber Park (*Stephen Pegler*). Sherwood Forest near Edwinstowe, 12. vi. 1914.

STYGNOCORIS D. and S.

- S. rusticus** Fall. Clumber Park (*Pegler*). South Leverton; Treswell Wood, 8. ix. 1897 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi. 1912; Epperstone Park, 6. ix. 1913; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

- S. pedestris** Fall. Clumber Park (*Pegler*). Thorney, Aug. 1913 (*L. A. Carr*). Sherwood Forest near Edwinstowe, 25. ix. 1913, and near Ollerton, June 1914; Widmerpool, 12. viii. 1914.

PERITRECHUS Fieb.

P. sylvestris Fab. Langford Moor near Newark, 14. viii. 1914.

TRAPEZONOTUS Fieb.

T. arenarius L. Sherwood Forest near Edwinstowe, swept from *Calluna*, 25. ix. 1913.

DRYMUS Fieb.

D. sylvaticus Fab. Retford; Clumber Park (*Pegler*). South Leverton; Treswell Wood, 29. v. 1899; Nottingham, 17. iv. 1906; Kingston-upon-Soar, 29. iii. 1912 (*Thornley*). Bingham, 11. iv. 1912; Creswell Crags, 22. ix. 1913; Sherwood Forest near Ollerton, June 1914, and near Edwinstowe, 10. viii. 1914; Crow Wood Hill, 16. i. 1915.

D. brunneus Sahlb. Sutton near Retford (*Pegler*). Sherwood Forest near Edwinstowe, June 1912, and near Ollerton, July 1912 and June 1914 (*L. A. Carr*).

D. piceus Flor. Sherwood Forest near Ollerton, 17—27. vi. 1914 (*L. A. Carr*).

NOTOCHILUS Fieb.

N. contractus H.-S. Treswell Wood, 29. v. 1899; Kingston-upon-Soar, 29. iii. 1912 (*Thornley*).

SCOLOPOSTETHUS Fieb.

S. grandis Hory. Bassingfield near Gamston, 2. vii. 1914 (*Robinson*).

S. affinis Schill. Leverton and Sutton, near Retford (*Pegler*).

S. thomsoni Reut. Skegby, under stones by roadside, 4. iv. 1905; Sherwood Forest near Edwinstowe, 12. vi. 1912; Thorney; Upton near Southwell, 30. vi. 1913; Crow Wood Hill, West Leake, 19. v. 1914.

S. decoratus Hahn. Sherwood Forest near Edwinstowe, swept commonly from *Calluna*, 30. viii. 1912 and 25. ix. 1913, also near Ollerton, June 1914; North Collingham, beaten from *Salix*, 25. viii. 1913; Creswell Crags, 22. ix. 1913; Radcliffe-on-Trent.

TINGIDAE.

PIESMA Lap.

- P. capitata** Wolff. South Leverton and Treswell Wood, common amongst grass, 6—29. v. 1899 (*Thornley*). Langford Moor near Newark, 14. viii. 1914.

ACALYPTA Westw.

- A. parvula** Fall. Bramcote (*Ryles*).

DICTYONOTA Curt.

- D. tricornis** Schr. Linby, beaten from broom (*Cytisus scoparius*), 18. ix. 1912.
- D. strichnocera** Fieb. Sherwood Forest near Edwinstowe, 30. viii. 1912 and 10. viii. 1914; Linby, beaten from broom, 18. ix. 1912.

DEREPHYSIA Spin.

- D. foliacea** Fall. Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). Crow Wood Hill, West Leake, 9. viii., and Aldercar Wood, Newstead, 13. viii. 1914 (*Morley and Carr*).

MONANTHIA Lep.

- M. ampliata** Fieb. Sutton near Retford (*Pegler*). Langford Moor, 29. vi. 1899 (*Thornley*). Gotham, 26. ix. 1912 (*Robinson*).
- M. cardui** L. On thistles, often common. Sutton near Retford (*Pegler*). South Leverton; Treswell Wood, 6. v. 1899; West Leake, 17. viii. 1904; Kingston-upon-Soar; Gotham, 9. viii. 1912 (*Thornley*). Linby; Epperstone Park; East and West Leake; Normanton-on-the-Wolds; Clipston Wolds; Sherwood Forest near Edwinstowe;—all Aug.—Sept. 1913-14.

GERRIDIDAE.

HYDROMETRA Latr.

- H. stagnorum** L. South Leverton; Kingston-upon-Soar; Thrumpton, in backwater of River Trent, 23. viii. 1904

(*Thornley*). Nottingham; canal at Lenton, 23. v. 1905 (*Carr*). Tollerton, 1911 (*Saunt*).

VELIA Latr.

V. currens Fab. Common on running water. Retford (*Pegler*). South Leverton and Treswell (*Thornley*). Nottingham; Linby; Edwinstowe, 25. ix. 1913.

GERRIS Fab.

G. thoracicus Schum. Trent backwater, Thrumpton, 23. viii. 1904 (*Thornley*). Canal at Cossall.

G. gibbifer Schum. South Leverton (*Thornley*). Nottingham (*Ryles*). Canal at Cossall.

G. lacustris L. Retford; South Leverton, common (*Thornley*).

G. odontogaster Zett. Retford (*Pegler*). Canal at Cossall. All these species are doubtless common, but the aquatic Hemiptera have hitherto been much neglected in Notts.

REDUVIIDAE.

PLOIARIOLA Reut.

P. vagabunda L. Treswell Wood, one specimen, 8. ix. 1897 (*Thornley*).

P. culiciformis De G. South Leverton, in outhouse at vicarage, two examples in 1898, one 19. iv. 1899 (*Thornley*).

NABIS Latr.

N. apterus Fab. Treswell Wood on hazel (*Corylus avellana*), one ♀, 3. ix. 1900 (*Thornley*).

N. major Cost. Retford district, not uncommon (*Pegler*). Barrow Hills, Everton; Gotham, Aug. 1912 (*Thornley*). Plumtree, 20. vii. 1911 (*Robinson*). Linby, 18. ix. 1912; Sherwood Forest, common; Crow Wood Hill, West Leake, 24. vii. 1912; Clipston Wolds, 12. viii. 1914.

N. flavomarginatus Scholtz. South Leverton, Treswell and Cottam near Retford (*Thornley*). Widmerpool, 25. ix. 1912; East Leake, 4. viii. 1914; Langford Moor, 14. viii. 1914.

- N. limbatus** Dahlb. Common. South Leverton, 8. ix. 1897; Treswell, 26. ix. 1898; Gotham, 22. viii. 1912 (*Thornley*). Beeston and Stapleford, 13. viii. 1914 (*Robinson*). Sherwood Forest near Edwinstowe; Cuckney Hay Wood, Nether Langwith; near Newbound Mill, Teversall; Linby; Park Drain, Misson; Langford Moor; Attenborough; Crow Wood Hill, West Leake; Clipston Wolds; Widmerpool;—all in Aug. and Sept. 1912-14.
- N. ferus** L. Retford; Cottam (*Pegler*). South Leverton; Treswell, 8. ix. 1897; Treswell Wood, 29. v. 1899 (*Thornley*). Beeston, 13. viii. 1914; Bulwell, 22. ix. 1914 (*Robinson*). Thorney; Sherwood Forest near Edwinstowe, 12. vi. 1912, and swept from *Calluna*, 25. ix. 1913; Finningley and Misson, 22. ix. 1914; Crow Wood Hill, West Leake, 8. ix. 1914; Gotham.
- N. rugosus** L. Sutton near Retford; Clumber Park (*Pegler*). Treswell Wood, common, 8. ix. 1897 and 29. v. 1899; South Leverton, 3. ix. 1897; Langford Moor, 29. vi. 1899 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; Epperstone Park, 6. ix. 1913.
- N. ericetorum** Scholtz. Sherwood Forest near Edwinstowe, swept from *Calluna* and grasses, Aug. and Sept. 1912-14; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; Langford Moor, swept from *Calluna*, etc., 14. viii. 1914; West Leake Hills, 21. viii. 1913.

SALDIDAE.

SALDA Fab.

- S. scotica** Curt. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- S. orthochila** Fieb. South Leverton, a few on flagstones in village (*Thornley*). Sherwood Forest, Ollerton, 20. ix. 1911 and June 1914.
- S. saltatoria** L. Cottam (*Pegler*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Langford Moor, 14. viii. 1914.
- S. cincta** H.-S. Clumber (*Pegler*). South Leverton (*Thornley*).
- S. cocksii** Curt. Clumber (*Pegler*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

CIMICIDAE.

CIMEX L.

- C. lectularius** L. Nottingham, and doubtless elsewhere !
C. columbarius Jen. Sherwood Forest (*H. Willoughby Ellis*).

LYCTOCORIS Hahn.

- L. campestris** Fab. South Leverton, common in haystack refuse, May 1899 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). East Leake, 20. iv. 1913 (*Saunt*).

PIEZOSTETHUS Fieb.

- P. cursitans** Fall. Sherwood Forest (*W. G. Blatch*).

ANTHOCORIS Fall.

- A. confusus** Reut. Common and generally distributed. Nottingham, Arnold, Bramcote, Stapleford, East and West Leake, East Bridgford, Fiskerton, Widmerpool, Epperstone Park, Newstead, Langford Moor, Sherwood Forest, Thorney, etc. Swept and beaten from various herbaceous plants, shrubs and trees, from June to October.
- A. nemoralis** Fab. Common and generally distributed. Nottingham, Gamston, Radcliffe-on-Trent, Plumtree, Cotgrave, West Leake, Kingston-upon-Soar, Attenborough, Fiskerton, North Collingham, Sherwood Forest, Treswell, Finningley, Misson, etc. On various plants throughout the summer.
- A. gallarum-ulmi** De G. North Collingham, beaten from oak, 25. viii. 1913.
- A. nemorum** L. Common and universally distributed in the county, on all sorts of plants; taken from March to October.

TETRAPHLEPS Fieb.

- T. vittata** Fieb. Bingham, two examples beaten from firs, 11. iv. 1912.

ACOMPOCORIS Reut.

- A. pygmaeus** Fall. Upton near Southwell, 30. vi. 1913; Epperstone Park, 6. ix. 1913; Creswell Crags, on *Pinus*, 22. ix. 1913; Sherwood Forest near Edwinstowe, 10. viii. 1914.

TRIPHLEPS Fieb.

T. nigra Wolff. East Leake, 4. viii. 1914.

T. majuscula Reut. South Leverton, May 1899 (*Thornley*).
Attenborough, 14. viii. 1913; Crow Wood Hill, West Leake,
19. v.; East Leake, 4. viii.; Langford Moor, 14. viii.; Park
Drain, Misson, 22. ix.—all 1914.

T. minuta L. Treswell, 8. ix. 1897; South Leverton, 8. v.
1899 (*Thornley*). Lambley, 17. viii. 1911; Cotgrave, 8.
viii. 1912 (*Robinson*).

MICROPHYSA Westw.

M. pselaphiformis Curt. Colwick (*Ryles*).

M. elegantula Baer. South Leverton, in crevices of bark of
oak, July 1896 (*Thornley*).

CAPSIDAE.

PITHANUS Fieb.

P. maerkeli H.-S. South Leverton; Sutton near Retford;
Treswell Wood, common in green drives, 10. vii. 1899
(*Thornley*). Cuckney Hay Wood, Nether Langwith, 11. viii.
1914 (*Morley and Carr*).

MIRIS Fab.

M. calcaratus Fall. Common and universally distributed in
the county, from May to end of September.

M. laevigatus L. South Leverton; Treswell and Treswell
Wood; Kingston-upon-Soar (*Thornley*). South Carlton;
Tuxford (*Peyler*). Arnold, 23. vii. 1914; Nuthall, 22. ix.
1914 (*Robinson*). Sherwood Forest near Edwinstowe;
Thorney; Bulwell Forest, 21. vii. 1913; common in many
places about East and West Leake, 19. v.—8. ix.; Cuckney
Hay Wood, 11. viii.; Langford Moor, 14. viii.—all 1914.

M. holsatus Fab. Treswell Wood, common, May to Sept. 1899
(*Thornley*). Aspley Woods near Nottingham, common, 28.
v.—28. viii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi.
1913; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914;
Aldercar Wood, Newstead, 29. vii. and 13. viii. 1914.

MEGALOCERAEA Fieb.

- M. erratica** L. South Leverton and Treswell, common in September; Littleborough, on river bank, 14. vii. 1899; Kingston-upon-Soar, Aug. 1911 (*Thornley*). Nuthall, 22. ix. 1914 (*Robinson*). East Leake; Crow Wood Hill, West Leake; near Park Drain, Misson. Taken rather commonly by sweeping grass, etc., 3. vii.—22. ix. 1911-14.
- M. linearis** Fuessl. Cottam near Retford, 12. vii. 1899; West Leake Hills (*Thornley*). Thorney (*L. A. Carr*). Tollerton, 11. vii. 1911 (*Robinson*). Crow Wood Hill, West Leake, 24. vii. to 10 viii. 1912; East Leake, 4. viii. 1914; Widmerpool, 12. viii. 1914.
- M. ruficornis** Fourc. South Leverton and Treswell Wood, 8. ix. 1897 (*Thornley*). Edwinstowe, Sherwood Forest, on birch, 1. vii. 1911, and on grasses, etc., 10. viii. 1914; East Leake, 3. vii. 1911 and 4. viii. 1914; Bulwell Forest, 21. vii. 1913; Widmerpool, 18. viii. 1913; Cotgrave, 12. viii. 1914.

TERATOCORIS Fieb.

- T. saundersi** D. and S. Thorney, Aug. 1913 (*L. A. Carr*).

LEPTOPTERNA Fieb.

- L. ferrugata** Fall. Sutton near Retford; Kingston-upon-Soar, 29. vii. 1912 (*Thornley*). Sherwood Forest near Ollerton, July 1912; East Leake, 3. vii. 1911.
- L. dolobrata** L. Common. South Leverton, Treswell Wood, Cottam, Rampton and Sutton, near Retford (*Thornley*). Tollerton (*Robinson*). Sherwood Forest, about Edwinstowe and Ollerton; Thorney; Langford Moor; Rolleston; Upton near Southwell; East and West Leake; Aspley Woods near Nottingham; etc. June to September.

MONALOCORIS Dahlb.

- M. filicis** L. On *Pteris aquilina* and *Lastrea filix-mas*, abundant where it occurs. Sherwood Forest, Edwinstowe, etc.; Cuckney Hay Wood, Nether Langwith; the Dumbles, Kirkby-in-Ashfield; Aldercar Wood, Newstead; Langford Moor; Crow Wood Hill, West Leake; Epperstone Park (*Carr*). Nuthall (*Robinson*). June to September.

BRYOCORIS Fall.

- B. pteridis** Fall. Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). Epperstone Park, abundant on *Lastrea filix-mas*, 6. ix. 1913; Aldercar Wood, Newstead, on *L. filix-mas*, 29. vii. and 13. viii. 1914; West Leake Hills, 9. viii. 1914.

PANTILIUS Curt.

- P. tunicatus** Fab. South Leverton, on *Corylus* (*Thornley*).

LOPUS Hahn.

- L. gothicus** L. Sherwood Forest near Ollerton (*Ryles*). Langford Moor, two specimens swept from *Salix repens*, 29. vi. 1899 (*Thornley* and *Carr*).

PHYTOCORIS Fall.

- P. populi** L. South Leverton, not uncommon in vicarage garden in crevices of bark of all kinds of trees, July 1900 (*Thornley*). West Leake, 6. ix. 1907; Nottingham, in crevices of trunk of sycamore in my garden, 10—12. viii. 1913, and beaten from *Burns*, 1. viii. 1914. Arnold, 23. viii. 1914.
- P. tiliae** Fab. Treswell Wood, 8—20. ix. 1897-8; South Leverton, in crevices of bark of fruit trees, 29. vii. 1900; Edwinstowe, in the Forest, not uncommon, 18. vii. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, on birch, 1. vii. 1911 and 30. viii. 1912; near Ollerton, July 1912; West Leake Hills, 9. viii. 1914; Widmerpool, beaten from birch, 18. viii. 1913; Aldercar Wood, Newstead (the var. *marmoratus*) 29. vii. 1914.
- P. longipennis** Flor. Treswell Wood in September (*Thornley*). Aspley Woods, 26. vii.—28. viii.; Crow Wood Hill, West Leake, 10. viii.; East Leake, 11. viii.; Sherwood Forest near Edwinstowe, 30. viii.—all 1912; Thorney; North Collingham, beaten from hawthorn, 25. viii.; Widmerpool, from oak, 18. viii.; Epperstone Park, from oak, *Salix*, etc., 6. ix.—all 1913; Aldercar Wood, Newstead, from *Salix*, *Populus tremula*, *Quercus* and *Betula*, 29. vii.—13. viii. 1914; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; etc.
- P. dimidiatus** Kb. Normanton-on-the-Wolds, beaten from *Rubus*, 3. ix. 1913.

- P. reuteri** Saund. Treswell Wood, 8. ix. 1897 (*Thornley*).
- P. pini** Kb. Sherwood Forest near Edwinstowe, one specimen, 10. viii. 1914. A Scotch species, only once previously recorded for England. Determined by Mr. E. A. Butler.
- P. varipes** Boh. Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Carr and Robinson*). Gotham, common, 20. viii. 1914 (*Thornley*).
- P. ulmi** L. Common. Gamston near Retford (*Pegler*). South Leverton, on *Anthemis*; Sutton near Retford; Kingston-upon-Soar, common on *Senecio jacobaea*; Gotham (*Thornley*). Arnold; Cotgrave (*Robinson*). Nottingham; Aspley Woods; Barton; West Leake Hills; Sherwood Forest; Langford Moor; North Collingham, on *Rubus*; Thorney; Cuckney Hay Wood, Nether Langwith; Aldercar Wood, Newstead; Fiskerton; Normanton-on-the-Wolds; etc. July to Sept.

CALOCORIS Fieb.

- C. ochromelas** Gmel. Aspley near Nottingham; Southwell, 15. vi. 1899 (*Ryles*). Sherwood Forest near Edwinstowe, on birch, 1. vii. 1911: common in same locality on oaks, etc., 12. vi. 1912.
- C. sexguttatus** Fab. Common. Treswell Wood; Sutton near Retford; Cottam; East Park Wood, Laxton; Kingston-upon-Soar (*Thornley*). Thorney (*L. A. Carr*). Nuthall; Cotgrave; Gamston near Nottingham (*Robinson*). Aspley Woods, in profusion, 19. vii. 1899; common, 27. vi. —26. vii. 1912 (*Thornley and Carr*). Bagthorpe, Nottingham; Radcliffe-on-Trent; East Leake; Sherwood Forest near Ollerton; Cuckney Hay Wood; Warsop; Aldercar Wood, Newstead; Linby; Kirkby-in-Ashfield;—all taken June to August, 1912-14.
- C. fulvomaculatus** De G. Treswell Wood, 10. vii. 1890 (*Thornley*). Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). Aspley Woods near Nottingham, 4. vii. 1912; Crow Wood Hill, West Leake, 24. vii. 1912; Quarry Banks, Linby, 20. vii. 1914.
- C. roseomaculatus** De G. Kingston-upon-Soar, not uncommon in field by gypsum works, 28. vii. 1908 (*Thornley*).
- C. alpestris** Mey. Treswell Wood, 15. vi. 1901 (*Thornley*). Hazelford; Southwell (*Ryles*). Epperstone Park, 14. vi. 1914 (*Saunt*). Aspley Woods near Nottingham, four specimens, 28. v. and 27. vi. 1912.

- C. bipunctatus** Fab. Very common and universally distributed in Nottinghamshire, on all sorts of plants, from June to September.
- C. lineolatus** Goeze. Clarborough near Retford; Kingston-upon-Soar, 27. vii. 1908 (*Thornley*). Sherwood Forest (*Ryles*). Nottingham; Bilborough; Tollerton; Plumtree;—all 11—20. vii. 1911 (*Robinson*). East Leake, 3. vii. 1911 and 4. viii. 1914; Foss Road, Widmerpool; Attenborough, by the Trent; North Collingham;—all 14—25. viii. 1913; Foss Road, Cotgrave, 12. viii. 1914;—swept from *Ononis* in each case.
- C. infusus** H.-S. Treswell Wood, one specimen, 20. ix. 1898 (*Thornley*). Radcliffe-on-Trent (*Ryles*). Sherwood Forest, Edwinstowe, 10. viii. 1914; Crow Wood Hill, West Leake, 9. viii. 1914.
- C. striatus** L. Treswell Wood, 15. vi. 1901; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Sherwood Forest, June 1904, tolerably abundant by beating young oaks on the Welbeck side of the Forest (*J. Kidson Taylor*). Sherwood Forest near Edwinstowe and Ollerton, 12. vi. and July 1912.

STENOTUS Jak.

- S. binotatus** Fab. Cottam near Retford, abundant in a grassy lane, 12. vii. 1899; Kingston-upon-Soar, 9. viii. 1912 (*Thornley*). Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). East Leake, 5. vii. 1911; Tollerton, 2. vii. 1911 (*Robinson*). Crow Wood Hill, West Leake, 24. vii. 1912.

DICHROOSCYTUS Fieb.

- D. rufipennis** Fall. Beeston (*Ryles*).

PLESIOCORIS Fieb.

- P. rugicollis** Fall. South Leverton; Treswell Wood, 15. vi. 1901 (*Thornley*). Aspley Woods near Nottingham, 26. vii. and 28. viii. 1912; Linby, 18. ix. 1912 and 20. vii. 1914; Widmerpool, 25. ix. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Upton near Southwell, 30. vi. 1913; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

LYGUS Hahn.

- L. pabulinus** L. Occurs commonly in all parts of the county from July to October.
- L. contaminatus** Fall. Langford Moor, not uncommon on birch, 29. vi. 1899; Thrumpton, 12. viii. 1912 (*Thornley*). Sherwood Forest, Edwinstowe and Ollerton, on birch, July and August, 1911—14; Bulwell Hall, 8. vii. 1912; Quarry Banks, Linby, and Aldercar Wood, Newstead, beaten from birch, 20—29. vii. 1914; North Collingham, swept from *Pulicaria dysenterica*, 25. viii. 1913; Upton near Southwell, beaten from *Salix*, 30. vi. 1913; Epperstone Park, 6. ix. 1913.
- L. viridis** Fall. Aldercar Wood, Newstead, beaten from *Rhamnus frangula*, 29. vii. 1914.
- L. lucorum** Mey. By the Trent, Barton, 27. vii. 1912; abundant on *Tanacetum vulgare* by the Trent at Attenborough, 14. viii. 1913; near Newbound Mill, Teversall, by sweeping *Spiraea ulmaria*, etc., 3. viii. 1912; Park Drain, Misson, 22. ix. 1914.
- L. spinolae** Mey. Nottingham, in garden, 19. vi. 1913; North Collingham, on *Salix*, 25. viii. 1913; East Leake, on *Urtica dioica*, 4. viii. 1914.
- L. pratensis** L. (including var. *campestris* Fall.). Common throughout the county.
- L. rubricatus** Fall. Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). Aspley Woods near Nottingham, 9. viii. 1912; Aldercar Wood, Newstead, 13. viii. 1914.
- L. cervinus** H.-S. Gotham, 9. viii. 1912 (*Thornley*). Thorney, August 1913 (*L. A. Carr*). Crow Wood Hill, West Leake, 10. viii. 1912; Widmerpool, beaten from *Quercus*, 18. viii. 1913; North Collingham, from *Salix*, 25. viii. 1913; Plumtree station on *Buxus*, and Normanton-on-the-Wolds on *Rubus*, 3. ix. 1913; Aldercar Wood, Newstead, from *Quercus*, 29. vii. and 13. viii. 1914.
- L. pastinacae** Fall. Rampton, 28. vi. 1901; Kingston-upon-Soar, Aug. 1911 (*Thornley*). Bagthorpe, Nottingham, 18. vii. 1912; West Leake, 23. vi. 1912; East Leake, on *Conium maculatum*, 4. viii. 1914; Radcliffe-on-Trent, 12. ix. 1912; Sherwood Forest near Edwinstowe, 30. viii. 1912; near Park Drain station, Misson, common on *Conium*, 23. ix. 1914.

- L. kalmii** L. Thrumpton, 12. viii. 1912 (*Thornley*). Gunthorpe (*Ryles*). Thorney, Aug. 1913 (*L. A. Carr*). Aspley Road, Nottingham, 11. ix. 1913; Radcliffe-on-Trent, 1. v. 1913 (*Robinson*). Aspley Woods, 26. vii. 1912; Fiskerton, abundant on *Conium maculatum*, 25. vii. 1913; West Leake Hills, beaten from elm, 21. viii. 1913; North Collingham, beaten from *Rubus*, 25. viii. 1913; Normanton-on-the-Wolds, from *Salix*, 3. ix. 1913; Epperstone Park, from *Salix*, 6. ix. 1913.

CAMPTOZYGUM Reut.

- C. pinastri** Fall. Sherwood Forest near Edwinstowe, 10. viii. 1914.

POECILOSCYTUS Fieb.

- P. gyllenhalii** Fall. Quarry Banks, Linby, 20. vii. 1914.

LIOCORIS Fieb.

- L. tripustulatus** Fab. Clumber (*Pegler*). South Leverton; Nottingham; Kingston-upon-Soar, 29. vii.; Thrumpton, 12. viii. 1912 (*Thornley*). Thorney (*L. A. Carr*). Cotgrave, 23. x. 1913 (*Robinson*). Linby, 18. ix.; East Leake, 26. v.; Radcliffe on-Trent, 29. v.; Widmerpool, 25. ix.—all 1912; Crow Wood Hill, West Leake, 10. viii. 1912 and 19. v. 1914; Sherwood Forest near Ollerton, July 1912; North Collingham, on *Salix*, 25. viii. 1913; Normanton-on-the-Wolds, 3. ix. 1913.

CAPSUS Fab.

- C. ruber** L. Nottingham; Radcliffe-on-Trent (*Ryles*). Gotham and Thrumpton, 5—12. viii. 1912 (*Thornley*). Stapleford (*J. Dawson*). Aspley Woods, 28. viii. 1912.

RHOPALOTOMUS Fieb.

- R. ater** L. Aspley Woods (*Ryles*). South Leverton; Treswell Wood, 15. vi. 1901 (*Thornley*). Hoveringham, 22. vi. 1912 (*Robinson*). Thorney, Aug. 1913 (*L. A. Carr*). East and West Leake, June and July 1911—14; Sherwood Forest, Edwinstowe and Ollerton, June 1912—14; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

DICYPHUS Fieb.

- D. constrictus** Boh. Aldercar Wood, Newstead, on *Digitalis purpurea*, 29. vii. 1914; Crow Wood Hill, West Leake, 8. ix. 1914.

- D. epilobii** Reut. Abundant on *Epilobium hirsutum*. South Leverton; Sutton near Retford; Kingston-upon-Soar (*Thornley*). Arnold; Papplewick (*Robinson*). Ditch by Aspley Woods; Linby; Newbound Mill, Teversall; Edwinstowe and Ollerton; West Leake Hills; Fiskerton; Upton near Southwell; Park Drain, Misson; Widmerpool; Normanton-on-the-Wolds; etc. July to September.
- D. errans** Wolff. Crow Wood Hill, West Leake, 9. viii. 1914.
- D. stachydis** Reut. Common on *Stachys sylvatica*, June to October. South Leverton; Kingston-upon-Soar (*Thornley*). Cotgrave; Bilborough; Nuthall; Lambley Dumbles; Papplewick; East Bridgford; Bulwell Hall; Radcliffe-on-Trent (*Robinson*). Aspley Woods; Linby; Kirkby Dumbles; Cuckney Hay Wood, Nether Langwith; Sherwood Forest near Edwinstowe; Creswell Crags; Crow Wood Hill, West Leake; Normanton-on-the-Wolds; Widmerpool; Epperstone Park; Radcliffe-on-Trent; North Collingham, on *Ononis*; etc.
- D. pallidicornis** Fieb. Upton near Southwell, 12. vii. 1913; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; Aldercar Wood, Newstead, common on *Digitalis purpurea*, 29. vii. and 13. viii. 1914.
- D. globulifer** Fall. Clumber, one specimen (*Pegler*).

CAMPYLONEURA Fieb.

- C. virgula** H.-S. Radcliffe-on-Trent (*Ryles*). Sherwood Forest near Ollerton, July 1912; Thorney, 15—19. viii. 1913 (*L. A. Carr*). Crow Wood Hill, West Leake, 10. viii. 1912 and 9. viii. 1914; Kingston Park, on *Salix*, 15. viii. 1913; North Collingham, beaten from ash and poplar, 25. viii. 1913; Epperstone Park, 6. ix. 1913.

CYLLOCORIS Hahn.

- C. histrionicus** L. Beeston (*Ryles*). Treswell Wood, 15. vi. 1901, etc.; Langford Moor, 29. vi. 1899 (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton, on birch, July 1911-12.
- C. flavonotatus** Boh. Southwell, 18. vi. 1899 (*Ryles*). East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi. 1912.

AETORHINUS Fieb.

- Ae. angulatus** Fab. Common and universally distributed in the county. Beaten from *Alnus*, *Corylus*, *Fraxinus*, *Quercus*, *Salix*, *Ulmus*, etc.

GLOBICEPS Latr.

- G. cruciatus** Reut. Langford Moor near Newark, 14. viii. 1914 (*C. Morley*).

MECOMMA Fieb.

- M. ambulans** Fall. Rather common. Sutton near Retford; Treswell Wood (*Thornley*). Aspley Woods; Sherwood station, Nottingham, on broom; Bulwell Forest; Linby; Aldercar Wood, Newstead; Cuckney Hay Wood, Nether Langwith; Sherwood Forest near Edwinstowe and Ollerton; Thorney; Crow Wood Hill, West Leake; etc. July to September.

CYRTORRHINUS Fieb.

- C. caricis** Fall. Quarry Banks, Linby, by sweeping in damp spot among *Carax*, etc., 18. ix. 1912 (*J. W. Carr*). Thorney, Aug. 1913 (*L. A. Carr*).

ORTHOTYLUS Fieb.

- O. bilineatus** Fall. Thorney, common, 15—19. viii. 1913 (*L. A. Carr*). Epperstone Park, on *Populus tremula*, 6. ix. 1913; Aldercar Wood, Newstead, abundant on *P. tremula*, 29. vii. and 13. viii. 1914.
- O. marginalis** Reut. Thorney (*L. A. Carr*). Upton near Southwell, 30. vi.; Fiskerton, 25. vii.; Attenborough, 14. viii.; Kingston Park, 15. viii.; Widmerpool, 18. viii.;—all 1913. Beaten from various species of *Salix*.
- O. nassatus** Fab. South Leverton; Littleborough, on willows on the river bank, 14. vii. 1899 (*Thornley*). Thorney (*L. A. Carr*). Bagthorpe, Nottingham, 18. vii.; Aspley Woods, 28. viii.; Cuckney Hay Wood, 19. viii.; Linby, 18. ix.;—all 1912; Epperstone Park, 6. ix. 1913; Crow Wood Hill, West Leake, 9. viii. 1914.
- O. viridinervis** Kb. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*). Foss Road, Widmerpool, beaten from *Ulmus montanus*, 18. viii. 1913.

- O. ochrotrichus** D. and S. Plumtree, 4. viii. 1914 (*Robinson*).
- O. diaphanus** Kb. Attenborough, 14. viii.; Kingston Park, 15. viii.; North Collingham, 25. viii.; Normanton-on-the-Wolds, 3. ix.;—all 1913; near Park Drain station, Misson, 22. ix. 1914; all beaten from *Salix*.
- O. chloropterus** Kb. Nottingham, beaten from broom (*Cytisus scoparius*) at Sherwood station, 18. vii. 1913, and in garden on Redcliffe road, 25. vii. 1914; Linby, abundant on broom by side of Gt. Central railway, 18. ix. 1912.
- O. ericetorum** Fall. Sherwood Forest near Edwinstowe, swept from *Calluna*, Aug. and Sept. 1912-13-14; Langford Moor, from *Calluna*, 14. viii. 1914.

LOXOPS Fieb.

- L. coccinea** Mey. Radcliffe-on-Trent (*Ryles*).

HETEROTOMA Latr.

- H. merioptera** Scop. Common. South Leverton; Sutton near Retford; Kingston and Gotham (*Thornley*). Nottingham; Attenborough; Crow Wood Hill and West Leake Hills; Upton; Fiskerton; Widmerpool; Normanton-on-the-Wolds; Langford Moor; North Collingham; Thorney. Found on various plants, July to September.

HETEROCORDYLUS Fieb.

- H. genistae** Scop. East Leake, not uncommon on *Genista tinctoria*, 3. vii. 1911; Bulwell Forest, 21. vii. 1913; Kirkby-in-Ashfield, very common on *Genista tinctoria*, 19. vii. 1913.
- H. tibialis** Hahn. Clumber Park (*Pegler*). Treswell Wood, 15. vi. 1901 (*Thornley*).

MALACOCORIS Fieb.

- M. chlorizans** Fall. Treswell Wood, common on trees, Sept. 1897-8; Kingston-upon-Soar, on apple trees, Aug. 1913 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Stapleford, on *Populus*, 13. viii. 1914 (*Robinson*). Widmerpool, on *Corylus*, 18. viii. 1913; Cnckney Hay Wood, Nether Langwith, 11. viii. 1914.

ONYCHUMENUS Reut.

C. decolor Fall. Bulwell Forest, 21. vii. 1913.

MEGALOCOLEUS Reut.

M. pilosus Schr. Trent-bank, Thrumpton, 12. viii. 1912 (*Thornley*). Trent-bank, Attenborough, common, 27. vii. 1912 and 14. viii. 1913. Swept from *Tanacetum vulgare* in both localities.

M. molliculus Fall. Trent-bank, Attenborough, swept from *Tanacetum vulgare*, 14. viii. 1913; East Leake, swept from *Achillea millefolium*, 4. viii. 1914.

MACROTYLUS Fieb.

M. solitarius Mey. Fiskerton, common on *Stachys sylvatica*, 25. vii. 1913; Widmerpool, rather common, 18. viii. 1913; Crow Wood Hill, West Leake, 9. viii. 1914.

M. paykulli Mey. East Leake, swept from *Ononis*, 3. vii. 1911 and 4. viii. 1914; Trent-bank, Attenborough, common on *Ononis*, 14. viii. 1913; Widmerpool, 18. viii. 1913.

HARPOCERA Curt.

H. thoracica Fall. Sherwood Forest near Edwinstowe and Ollerton, June 1912 and 1914 (*L. A. Carr*). Epperstone Park, 17. v. 1914 (*Saunt*). Crow Wood Hill, West Leake, 27. v. 1913.

BYRSOPTERA Spin.

B. rufifrons Fall. Southwell, 13. x. 1888 (*J. E. Mason*). Aspley Woods near Nottingham, 9. viii.; Barton, 27. vii.; Crow Wood Hill, West Leake, 10. viii.; —all 1912; Attenborough, swept from *Urtica dioica*, 14. viii. 1913; Sherwood Forest near Ollerton, June 1914; Quarry Banks, Linby, 20. vii. 1914.

PHYLUS Hahn.

P. palliceps Fieb. Aspley Woods near Nottingham (*Ryles*). Treswell Wood, 10. vii. 1899 (*Thornley*). Thorney; Edwinstowe, Sherwood Forest, beaten from birch, 1. vii. 1911.

P. melanocephalus L. Treswell Wood, 15. vii. 1899; Sherwood Forest near Edwinstowe, 18. vii. 1901 (*Thornley*).

Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*).
Edwinstowe, rather common on birch, 1. vii. 1911; Aspley
Woods near Nottingham, 4. vii. 1912; Beauvale Woods,
12. vii. 1912.

- P. coryli** L. Treswell Wood, 27. vi. 1901 (*Thornley*).
Thorney, Aug. 1913 (*L. A. Carr*). Aspley Woods, 4. vii.
1912; Epperstone Park, on *Corylus*, 6. ix. 1913.

PSALLUS Fieb.

- P. ambiguus** Fall. Nottingham, in gardens, 14. vii. 1912
and 19. vi. 1913 (*Thornley* and *Carr*). Sherwood Forest
near Ollerton, June 1914 (*L. A. Carr*). Quarry Banks,
Linby, 20. vii. 1914.

- P. betuleti** Fall. Clumber (*Pegler*). Langford Moor, 29. vi.
1899 (*Thornley*). Sherwood Forest near Edwinstowe,
common on birch, 18. vii. 1901, 1. vii. 1911 (*Thornley* and
Carr). Quarry Banks, Linby, beaten from birch, 20. vii. 1914.

- P. obscurellus** Fall. Fiskerton, several specimens, 25. vii. 1913.

- P. variabilis** Fall. Aspley Woods, 11. and 27. vi. and 4. vii.
1912, common; Sherwood Forest, Edwinstowe and Ollerton,
common on birch, June and July 1911—14; Beauvale
Woods, 12. vii. 1912; the Dumbles, Kirkby-in-Ashfield,
28. vi. 1913; Thorney; Crow Wood Hill, West Leake, 14.—
17. vi. 1914 (*Carr*). Nuthall, 25. vi. 1914 (*Robinson*).

var. *simillimus* D. and S. Crow Wood Hill, West Leake, 14.
vi. 1913 and 9. viii. 1914.

- P. quercûs** Kb. Thorney, Aug. 1913 (*L. A. Carr*). West
Leake, 23. vi. 1912.

- P. lepidus** Fieb. Aspley Woods, 4. vii. 1912; Bulwell Hall
Park, 8. vii. 1912; Nottingham, beaten from *Fraxinus*, 17.
vii. 1913; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913,
common.

- P. alnicola** D. & S. Thorney, several examples, Aug. 1913
(*L. A. Carr*). Upton near Southwell, beaten from *Salix*,
30. vi. 1913.

- P. fallenii** Reut. Sherwood Forest near Edwinstowe, 30. viii.
1912 and 10. viii. 1914; Aldercar Wood, Newstead, beaten
from birch and aspen, 29. vii. 1914.

- P. varians** H.-S. Treswell Wood, 10. vii. 1899 and 15. vi.
1901 (*Thornley*). Nottingham, July 1912; Nuthall, 25. vi.

- 1914 (*Robinson*). Aspley Woods, 4. vii. 1912; Arnold, beaten from *Quercus*, 24. vii. 1913; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Warsop, 14. vii. 1913; Sherwood Forest near Ollerton, July 1912; Aldercar Wood, Newstead, beaten from oak, aspen, birch and *Ithamnus frangula*, 29. vii. 1914; Crow Wood Hill, West Leake, 14. vi. 1913.
- P. diminutus** Kb. Aldercar Wood, Newstead, beaten from *Quercus*, 29. vii. 1914.
- P. roseus** Fab. Thorney, Aug. 1913 (*L. A. Carr*). Widmerpool, beaten from *Salix* and *Corylus*, 18. viii. 1913; Epperstone Park, from *Salix*, 6. ix. 1913; Cuckney Hay Wood, Nether Langwith, from *Salix*, 11. viii. 1914; Langford Moor, from *Salix*, 14. viii. 1914.
- P. salicellus** Mey. South Leverton; Treswell Wood, 4 ix. 1900 (*Thornley*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912.
- P. rotermundi** Scholtz. Normanton-on-the-Wolds, on *Populus canescens*, 12. viii. 1914.

ATRACTOTOMUS Fieb.

- A. mali** Mey. Kingston-upon-Soar, Aug. 1913 (*Thornley*). Langford Moor near Newark, ♂, 16. viii. 1912.
- A. magnicornis** Fall. Thorney, several, Aug. 1913 (*L. A. Carr*). West Leake Hills, 21. viii. 1913; Epperstone Park, 6. ix. 1913; Upton near Southwell, several beaten from spruce-fir, 30. vi. 1913; Aldercar Wood, Newstead, 13. viii. 1914.

PLAGIOGNATHUS Fieb.

- P. albipennis** Fall. Upton near Southwell, common, 12. vii. 1913; Sherwood, Nottingham, 2. ix. 1913; from *Artemisia abrotanum* in both cases.
- P. chrysanthemi** Wolff. Common and generally distributed and found on a great variety of plants. July to September.
- P. arbustorum** Fab. Abundant and universally distributed. Occurs on all sorts of plants from June to September.
- P. pulicarius** Fall. Aldercar Wood, Newstead, 13. viii. 1914.

ASCIODEMA Reut.

- A. obsoletum** D. and S. Sherwood station, Nottingham, on *Cytisus scoparius*, 18. vii. 1913; Nottingham, on *Cytisus*, 25. vii. 1914; Bulwell Forest, common on *Ulex*, 21. vii. 1913.

CRYPTOCERATA.

NEPIDAE.

NEPA L.

- N. cinerea** L. South Leverton; Kingston-upon-Soar (*Thornley*). Sherwood Forest near Ollerton (*L. A. Carr*). Carlton near Nottingham (*Saunt*). Ponds in Cinder-hill brickyard; Warsop. Doubtless common in ponds.

NAUCORIDAE.

NAUCORIS Fab.

- N. cimicoides** L. North Wheatley near Retford (*Rev. T. C. B. Chamberlin*).

NOTONECTIDAE.

NOTONECTA L.

- N. glauca** L. South Leverton; Kingston-upon-Soar, Sept. 1901 (*Thornley*). Grantham canal, Nottingham, 19. ix. 1913; canal at Cossall; pond at Edwinstowe, 25. ix. 1913. The var. *maculata* Fab. occurred with the type at South Leverton.

CORIXIDAE.

CORIXA Geoffr.

- C. geoffroyi** Leach. South Leverton, not uncommon; back-water of River Trent, Thrumpton, 23. viii. 1904 (*Thornley*).
- C. affinis** Leach. Pool by River Trent near Midland Railway bridge, Nottingham, 20. ix. 1913.
- C. hieroglyphica** Duf. South Leverton (*Thornley*).
- C. sahlbergi** Fieb. South Leverton, not uncommon (*Thornley*).

- C. linnaei** Fieb. South Leverton, not uncommon (*Thornley*). Ponds at Edwinstowe, 25. ix. 1913.
- C. striata** L. South Leverton (*Thornley*). Canal at Cossall; ponds by river at Radcliffe-on-Trent; pool by River Trent near Midland Railway bridge, Nottingham, common, 20. ix. 1913; ponds at Edwinstowe, 25. ix. 1913.
- C. distincta** Fieb. South Leverton (*Thornley*). Pool by River Trent near Midland Railway bridge, Nottingham, 20. ix. 1913.
- C. fallenii** Fieb. South Leverton (*Thornley*). Pool by River Trent near Midland Railway bridge, Nottingham, 20. ix. 1913; pond at Edwinstowe, 25. ix. 1913.
- C. nigrolineata** Fieb. South Leverton, common (*Thornley*). Cossall.
- C. coleoptrata** Fab. Pool by River Trent near Midland Railway bridge, common, 20. ix. 1913; canal at Cossall.

HOMOPTERA.

CERCOPIDAE.

TRIECPHORA Am S.

- T. vulnerata** Illig. In profusion in East Park Wood and adjoining field, Laxton, 15. vi. 1906 (*Thornley*). Markham Clinton, 6. vi. 1906; Roe Wood, Winkburn, 9. vi. 1906; Park Wood, Cauntton, common, 9. vi. 1908; Sherwood Forest near Edwinstowe, June 1912.

APHROPHORA Germ.

- A. alni** Fall. Common. Treswell Wood; Kingston-upon-Soar (*Thornley*). Aspley Woods; Linby; Newstead; Cuckney Hay Wood; Warsop; Sherwood Forest near Edwinstowe and Ollerton; North Collingham; Langford Moor; Epperstone Park; Upton near Southwell; Fiskerton; Caythorpe; West Leake Hills; Widmerpool; etc. Beaten from *Fraxinus*, *Quercus*, *Ulmus*, *Betula*, *Castanea*, *Populus*, *Salix*, conifers, and *Rhamnus catharticus*, as well as swept from low herbage. June to October.
- A. salicis** De G. On willows, locally common. Treswell Wood, Sept. 1898 (*Thornley*). Thorney, Aug. 1913 (*L. A.*

Carr). Aspley Woods, 9. vii. 1912; Epperstone Park, 6. ix. 1913; Langford Moor, 14. viii. 1914.

PHILAENUS Stal.

- P. spumarius** L. Very abundant in every part of the county from June to October. The forms *leucophthalmus* L., *lateralis* L., *leucocephalus* Germ., *fasciatus* Fab., *vittatus* Fab., and *populi* Fab., are all of general occurrence. The form *ustulatus* Fall. has been taken at Thorney, and the form *praeustus* Fab. at East and West Leake.
- P. campestris** Fall. Apparently rare. Upton near Southwell, 30. vi. 1913; East Leake, 4. viii. 1914.
- P. exclamationis** Thunb. Sherwood Forest near Edwinstowe, rather common; Langford Moor. End of June to early October.
- P. lineatus** L. Very common and universally distributed. June to October.

MEMBRACIDAE.

CENTROTUS Fab.

- C. cornutus** L. Rare. Sherwood Forest near Edwinstowe, one specimen, June 1912; Thorney, two fine examples, Aug. 1913 (*L. A. Carr*).

JASSIDAE.

ULOPA Fall.

- U. reticulata** Fab. Sherwood Forest near Edwinstowe and Ollerton, common on *Calluna*, 30. viii. 1912 and 10. viii. 1914; Langford Moor near Newark, under *Calluna*, 14. viii. 1914.

MEGOPHTHALMUS Curt.

- M. scanicus** Fall. Sherwood Forest near Ollerton; Thorney (*L. A. Carr*). Aspley Woods near Nottingham; Cuckney Hay Wood, Nether Langwith; Linby; Aldercar Wood, Newstead; Langford Moor; Crow Wood Hill, West Leake. July—September, 1912—14.
- M. scabripennis** Edw. Linby, 18. ix. 1912; Bulwell Forest, 21. vii. 1913; Sherwood Forest near Ollerton, several specimens, July 1912 and June 1914. "Distinguished, amongst other things, by a certain tuberculation of the upper surface of the elytra which is wanting in *M. scanicus*" (*J. Edwards*).

LEDRA Fab.

- L. aurita** L. Rare. Treswell Wood (*Thornley*). Sherwood Forest near Edwinstowe, June 1912; Thorney, adult and nymph, Aug. 1913 (*L. A. Carr*).

TETTIGONIA Geoffr.

- T. viridis** L. Clumber (*Pegler*). Thorney, rather common, 15–19. viii. 1913 (*L. A. Carr*). Near Newbound Mill, Teversall, both sexes very common amongst vegetation in swampy places by stream, 3. viii. 1912; Foss Road, Widmerpool, 12. viii.—25. ix. 1912–13–14.

EUACANTHUS Lep. et Serv.

- E. interruptus** L. Common throughout the county. July—September. The Rev. A. Thornley took a unicolourous variety entirely without markings at Rampton near Retford, 18. vii. 1899 (*teste Edwards*).
- E. acuminatus** Fab. Sherwood Forest near Ollerton, July 1912; Thorney, Aug. 1913 (*L. A. Carr*). Aspley Woods near Nottingham, several examples, 4. vii. and 9. viii. 1912; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Fiskerton, 25. vii. 1913.

BATRACOMORPHUS Lewis.

- B. lanio** L. Rather common on oaks, and distributed throughout the county. June—October.

ONCOPSIS Burm.

- O. alni** Schr. Sherwood Forest near Edwinstowe, 1. vii. 1911; garden at Sherwood Rise, Nottingham, 2. vi. 1912; Aldercar Wood, Newstead, beaten from *Alnus glutinosa*, 29. vii. 1914.
- O. rufusculus** Fieb. On birch. Sherwood Forest near Edwinstowe, 1. vii. 1911, 30. viii. 1912, and 10. viii. 1914; Quarry Banks, Linby, 20. vii. 1914; Aldercar Wood, Newstead, 29. vii. 1914; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; Langford Moor, 14. viii. 1914.
- O. flavicollis** L. Sherwood Forest near Edwinstowe, common on birch, 18. vii. 1901 and 10. viii. 1914; Thorney, 15–19. viii. 1913; garden at Sherwood Rise, Nottingham, 14. vi. 1912; Quarry Banks, Linby, several beaten from birch, 20.

vii. 1914; Aldercar Wood, Newstead, from birch and hazel, 29. vii. and 13. viii. 1914 (*Carr*). Nuthall, 25. vi. 1914 (*Robinson*). Kingston-upon-Soar, from lime, 24. vii. 1914 (*Thornley*).

MACROPSIS Lewis.

M. tiliae Germ. Thorney, August 1913 (*L. A. Carr*).

M. scutellata Boh. Treswell Wood; Kingston-upon-Soar, 29. vii. 1912 (*Thornley*). Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*).

M. rubi Boh. On *Rubus*. Langford Moor near Newark, 16. viii. 1912; Sherwood, Nottingham, 20. viii. 1913 and 27. vii. 1914; North Collingham, 25. viii. 1913; Normanton-on-the-Wolds, 3. ix. 1913; East Leake, 4. viii. 1914; Quarry Banks, Linby, 20. vii. 1914; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

M. tibialis Scott. Sherwood Forest near Ollerton, 22—26. vii. 1912; Thorney 15—19 viii. 1913 (*L. A. Carr*). Radcliffe-on-Trent, 12. ix. 1912 and 24. ix. 1914 (*Robinson*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 and 11. viii. 1914; Normanton-on-the-Wolds, 3. ix. 1913.

M. cerea Germ. Langford Moor near Newark, beaten from *Salix*, 14. viii. 1914.

M. virescens Fab. Attenborough, beaten from *Salix*, 14. viii. 1913.

IDIOCERUS Lewis.

I. adustus H.-S. Common. Treswell Wood, common on oak, etc., 4. ix. 1900 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Attenborough, beaten from *Salix alba*, 14. viii. 1912; Hoveringham, from *Salix alba*, 4. ix. 1912; North Collingham, abundant on *Salix*, 25. viii. 1913; Epperstone Park, on *Salix* and oak, 6. ix. 1913; Widmerpool, on *Salix*, 12—18. viii. 1913-14; Kingston Park, on *Salix*, 15. viii. 1913; Normanton-on-the-Wolds, on *Salix*, 3. ix. 1913; Park Drain, Misson, on *Salix*, 22. ix. 1914.

I. tremulae Estl. Aldercar Wood, Newstead, several specimens beaten from *Populus tremula*, 29. vii. and 13. viii. 1914.

I. elegans Flor. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

I. laminatus Flor. Thorney, 15—19. viii. 1913. *L. A. (Carr)*. Epperstone Park, beaten from *Populus tremula*, 6. ix. 1913.

I. lituratus Fall. On *Salix*. Hoveringham, 4. ix. 1912; Quarry Banks, Linby, 18. ix. 1912; Widmerpool, 25. ix. 1912 and 18. viii. 1913; Attenborough, 14. viii. 1913; Cuckney Hay Wood, 11. viii. 1914; Langford Moor, 14. viii. 1914; Finningley and Misson, 22. ix. 1914.

I. vitreus Fab. Attenborough, rather common on Lombardy poplars, 14. viii. 1913; garden on Coppice Road, Nottingham, common on Lombardy poplars, 29. viii. 1914.

I. fulgidus Fab. Thorney, Aug. 1913, common (*L. A. Carr*). Warsop, 14. vii.; Attenborough, abundant on Lombardy poplar, 14. viii.; Arnold, beaten from *Populus nigra*, 24. vii.; North Collingham, on *P. nigra*, 25. viii.; Epperstone Park, many beaten from aspen (*Populus tremula*) and one from *Quercus*, 6. ix.; Nottingham, 20. vii. and 7. x., from Lombardy poplars;—all 1913. Aldercar Wood, Newstead, on *Populus tremula*, 29. vii. 1914; Cuckney Hay Wood, 11. viii. 1914; Normanton-on-the-Wolds, on *Populus canescens*, 12. viii. 1914.

I. populi L. Thorney, common, 15—19. viii. 1913 (*L. A. Carr*). Epperstone Park, several beaten from *Populus tremula*, 6. ix. 1913; Cuckney Hay Wood, Nether Langwith; Aldercar Wood, Newstead, from *P. tremula*; Langford Moor; Widmerpool;—all 11—14. viii. 1914.

I. confusus Flor. Common on *Salix caprea* and *S. cinerea*, July to October. Treswell Wood (*Thorntley*). Ollerton; Cuckney Hay Wood, Nether Langwith; Linby; Aldercar Wood, Newstead; Aspley Woods; Arnold; Fiskerton; Epperstone Park; Langford Moor; Crow Wood Hill, West Leake; Widmerpool; Nottingham; Finningley; Park Drain, Misson.

I. albicans Kbm. Normanton-on-the-Wolds, several specimens beaten from *Populus canescens*, 12. viii. 1914.

AGALLIA Curt.

A. puncticeps Germ. Common. Thorney (*L. A. Carr*). Radcliffe-on-Trent (*Robinson*). Aspley Woods; Barton; Attenborough; Quarry Banks, Linby; Aldercar Wood, Newstead, abundant; Cuckney Hay Wood, Nether Langwith; Sherwood Forest near Ollerton; Epperstone Park; North Collingham; Crow Wood Hill, West Leake; Plumtree. Swept from *Corylus*, *Juncus*, *Urtica*, *Rubus* and other plants, July—Sept., 1912—14.

- A. venosa** Fall. Plumtree, swept from grasses in dry pasture, 3. ix. 1913; Langford Moor near Newark, 14. viii. 1914.

ACOCEPHALUS Germ.

- A. nervosus** Schr. Rampton Marsh, 18. vii. 1899; Gotham, 5. viii. 1912 (*Thornley*). Sherwood Forest near Ollerton and Edwinstowe, common; Cuckney Hay Wood; Linby; Aspley Woods; Crow Wood Hill, West Leake; Barton; Caythorpe;—all July—Sept., 1912; Fiskerton, 25. viii. 1913; Langford Moor, 14. viii. 1914.
- A. bifasciatus** L. Treswell, July 1899; Trent-side, Rampton, 30. vii. 1902 (*Thornley*). Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*). Langford Moor near Newark, 16. viii. 1912.
- A. trifasciatus** Fourcr. “Langford Moor near Newark, ♂, ♀, swept from heather, August 16th, 1912. This species, the name of which appears in Stephens’ Catalogue of British Insects (1829) and is mentioned (in a manner which suggests that it was unknown to the author and his contemporaries) in Curtis’s British Entomology (1836), has not been recognised by subsequent British writers and this record of Prof. Carr’s captures is therefore of especial interest. The males are distinguished from those of *A. bifasciatus* by the possession of a comparatively broad white space across the extreme apex of the elytra, and four instead of six barbs to the aedeagus.” (*J. Edwards*). Taken again, in the same locality, by Mr. Claude Morley and myself, 14. viii. 1914 (*J.W.C.*).
- A. albifrons** L. Sherwood Forest near Edwinstowe and Ollerton, not uncommon, 12. vi.—30. viii. 1912—14; Aspley Woods near Nottingham, 28. viii. 1912; Plumtree, 3. ix. 1913.
- A. histrionicus** Fab. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*).
- A. flavostrigatus** Don. South Leverton (*Thornley*). Sherwood Forest near Ollerton, 22—26. vii. 1912; Thorney, common, Aug. 1913 (*L. A. Carr*).

EUPELIX Germ.

- E. producta** Germ. Epperstone Park, ♀, 6. ix. 1913; Crow Wood Hill, West Leake, ♂, 9. viii. 1914; one specimen in each locality by sweeping rough grass.

DORATURA J. Sahl.

D. stylata Boh. Langford Moor near Newark, 16. viii. 1912.

RHYTISTYLUS Fieb.

R. proceps Kbm. Sherwood Forest near Edwinstowe, 25. ix. 1913.

STICTOCORIS Thoms.

S. flaveola Boh. Fiskerton, 25. vii. 1913.

ATHYSANUS Burm.

A. brevipennis Kbm. Sherwood Forest near Edwinstowe, 10. viii. 1914.

A. sordidus Zett. Treswell (*Thornley*). Sherwood Forest near Ollerton, 22—26. vii. 1912; Thorney, Aug. 1913 (*L. A. Carr*). Epperstone Park, 6. ix. 1913; Widmerpool, 18. viii. 1913.

A. sahlbergi Reut. Plumtree, 20. vii. 1911 (*Robinson*). Sherwood Forest near Ollerton, 22—26. vii. 1912; Thorney, Aug. 1913 (*L. A. Carr*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912.

A. grisescens Zett. The Dumbles, Kirkby-in-Ashfield, 28. vi.; near Newbound Mill, Teversall, 25. vi.; Crow Wood Hill, West Leake, 14. vi.; Thorney, Aug.;—all 1913.

A. plebejus Fall. (= *A. communis* J. Sahl.). South Leverton (*Thornley*). Gotham, 26. ix. 1912 (*Robinson*). Widmerpool, 25. ix. 1912; Bulwell Forest, on *Galium verum* and fine heath grasses, 21. vii. 1913; Attenborough, 14. viii. 1913; Plumtree, abundant on grasses in dry pasture, 3. ix. 1913; Fiskerton, 25. vii. 1913; East and West Leake, 4. viii.—8. ix. 1914; Sherwood Forest near Edwinstowe, 10. viii. 1914; Aldercar Wood, Newstead, 13. viii. 1914.

A. lineolatus Brullé. (= *A. obscurellus* Kbm.). South Leverton (*Thornley*). Linby, 18. ix. 1912 (*Robinson and Carr*).

A. obsoletus Kbm. South Leverton (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Bulwell forest, common; near Newbound Mill, Teversall, common; Linby; Aldercar Wood, Newstead; Cuckney Hay Wood, Nether Langwith; Finningley, very common; Widmerpool; Plumtree;—all July to Sept., 1912—14.

var. *piceus* Scott. Bulwell Forest, 8. viii. 1912.

- A. melanopsis** Hdy. Sherwood Forest near Edwinstowe, swept commonly from *Calluna*, etc., 25. ix. 1913; Creswell Crags, rather common, 22. ix. 1913.

DELTOCEPHALUS Burm.

- D. multinotatus** Boh. Widely distributed in the county. Quarry Banks, Linby, 18. ix. 1912 and 20. vii. 1914, many specimens, including three of the beautiful macropterous female; Creswell Crags, 22. ix. 1913; West Leake Hills, 21. viii. 1913 and 8. ix. 1914; Plumtree, 3. ix. 1913. Also taken at Thorney in Aug. 1913 by L. A. Carr. This species, here recorded for the first time as British, may be readily distinguished, as Mr. J. Edwards pointed out to me, by the three pairs of dark spots on the crown. It has recently been taken in North-East Yorkshire and in Epping Forest.
- D. ocellaris** Fall. Very common by sweeping grasses and other low herbage, June to September. South Leverton (*Thornley*). Thorney (*L. A. Carr*). Gamston; Beeston; Strelley; Nuthall (*Robinson*). Sherwood Forest near Ollerton and Edwinstowe; Creswell Crags; Finningley; Misson; Aldercar Wood, Newstead; Nottingham; Aspley Woods; Epperstone Park; Langford Moor; Plumtree; East and West Leake; Widmerpool; Upton near Southwell; Fiskerton; etc.
- D. flori** Fieb. Bulwell Forest near Nottingham, 21. vii. 1913; Epperstone Park, 6. ix. 1913.
- D. distinguendus** Flor. Sherwood Forest near Edwinstowe and Ollerton, 22. vii.—30. viii. 1912; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Langford Moor, common, 16. viii. 1912 and subsequently; Bulwell Forest, 21. vii. 1913; Epperstone Park, 6. ix. 1913.
- D. striatus** L. Sherwood Forest near Edwinstowe, beaten from birch, 1. vii. 1911; Aspley Woods near Nottingham, 4. vii. 1912 (*Carr*). Gotham, 26. ix. 1912 (*Robinson*).
- D. substriatus** Then. "Epperstone Park, 6. ix. 1913; Sherwood Forest near Edwinstowe, swept from *Calluna*, 25. ix. 1913 (*J. W. Carr*). This is one of the three species which have hitherto been included in British collections under the name *striatus*, L. Its aedeagus is trumpet shaped; that of *D. striatus*, as defined by Prof. Then, resembles a spoon of which the handle is about equal in length to the bowl" (*J. Edwards*).

- D. thenii** Edw. "Sherwood Forest near Edwinstowe, 10. viii. 1914 (*J. W. Carr*). The characters distinguishing this species from *D. striatus* were pointed out by Prof. Then in 1889, but he neglected to give it a name. The aedeagus is very characteristic; its free portion consists of two chitinous branches resembling the frame of a lyre and connected by a transparent membrane" (*J. Edwards*).
- D. punctum** Flor. Sherwood Forest, Ollerton, 20. ix. 1911, and Edwinstowe, 10. viii.—25. ix. 1912—14; Bulwell Forest, 21. vii. 1913; Quarry Banks, Linby, 20. vii. 1914.
- D. abdominalis** Fab. Aspley Woods, common, 27. vi.—26. vii. 1912; Crow Wood Hill, etc., West Leake, 24. vii. 1912 and 14. vi.—21. viii. 1913; Bulwell Forest, 21. vii. 1913; Quarry Banks, etc., Linby, 20—29. vii. 1914, common; Aldercar Wood, Newstead, 29. vii. 1914.
- D. pascuellus** Fall. Cuckney Hay Wood, Nether Langwith; Quarry Banks, Linby; Thorney; Creswell Crags; Epperstone Park; Plumtree;—all Aug. and Sept. 1912-13.
- D. coroniceps** Kbm. "Sherwood Forest near Edwinstowe, 10. viii. 1914 (*J. W. Carr*). This species, which occurs in heathy places, both wet and dry, resembles *D. coronifer* Marsh. in having a white-spotted black band across the forehead; but the combined outline of the genital plates in the latter is triangular, and not paraboloid as in the former" (*J. Edwards*).
- D. pulicaris** Fall. Sherwood Forest near Edwinstowe; Cuckney Hay Wood, Nether Langwith; Langford Moor; Plumtree; Crow Wood Hill, West Leake; Fiskerton; Attenborough; Finningley;—taken by sweeping grasses, etc., Aug. and Sept. 1912—14.

JASSUS Fab.

- J. commutatus** Fieb. Thorney, two specimens, Aug. 1913 (*L. A. Carr*).
- J. modestus** Fieb. Caythorpe, beaten from *Rhamnus catharticus*, 4. ix. 1912 (*Thornley and Carr*).
- J. mixtus** Fab. Rather common. South Leverton on oak, 21. vii. 1900; Treswell Wood, 4. ix. 1900; Kingston-upon-Soar, 28. vii. 1914 (*Thornley*). Sherwood Forest near Ollerton, June 1912; Thorney, Aug. 1913 (*L. A. Carr*). Linby, 18. ix. 1912; Nuthall, 9. vii. 1914 (*Robinson*). Cuckney Hay Wood, Nether Langwith; Aldercar Wood,

Newstead; Aspley Woods near Nottingham; Langford Moor near Newark; North Collingham, beaten from poplar; Epperstone Park, from oak; Crow Wood Hill, West Leake; Widmerpool;—all July to Sept., 1912—14.

THAMNOTETTIX Zett.

- T. prasinus** Fall. Treswell Wood (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Sherwood Forest near Edwinstowe, on birch, 1. vii. 1911; Aspley Woods, common, 27. vi.—26. vii. 1912; Cuckney Hay Wood, 19. viii. 1912, etc.; North Collingham, on oak and poplar, 25. viii. 1913; Quarry Banks, Linby, on birch, 20. vii. 1914; Langford Moor, 14. viii. 1914.
- T. subfuscus** Fall. Treswell Wood, common, 4. v. 1901 (*Thornley*). Thorney (*L. A. Carr*). Sherwood Forest near Edwinstowe, beaten from birch, 1. vii. 1911 and 25. ix. 1913; Aspley Woods, 4. vii. 1912; North Collingham, off poplar, 25. viii. 1913; West Leake Hills, beaten from oak, 21. viii. 1913; Crow Wood Hill, West Leake, 17. v. 1914; Quarry Banks, Linby, off birch, 20. viii. 1914.
- T. cruentatus** Panz. Treswell Wood, 29. v. 1899 (*Thornley*).
- T. splendidulus** Fab. Aspley Woods, several specimens taken between 26. vii. and 28. viii. 1912 (*Carr*). Thorney (*L. A. Carr*). Epperstone Park, 6. ix. 1913 (*Thornley* and *Carr*).
- T. croceus** H.-S. South Leverton and Treswell Wood (*Thornley*). Thorney (*L. A. Carr*). Beeston, 13. viii. 1914 (*Robinson*). Sherwood Forest near Edwinstowe, 12. vi. 1912; Plumtree, very common on grasses in dry pasture, 3. ix. 1913; Crow Wood Hill, West Leake, common, 19. v.—8. ix. 1914.

LIMOTETTIX J. Sahl.

- L. striola** Fall. Quarry Banks, Linby, several specimens by general sweeping, 18. ix. 1912.
- L. antennata** Boh. Papplewick, several specimens, 9. x. 1913; Bulcote Wood, near Burton Joyce, 6. x. 1913 (*Robinson*).
- L. quadrinotata** Fab. Very common on grasses, etc., June to September. Thorney (*L. A. Carr*). Gotham; Radcliffe-on-Trent (*Robinson*). Nottingham; Aspley Woods; Bulwell Forest; Linby; Newstead; Newbound Mill, Teversall; Cuckney Hay Wood; Sherwood Forest near Ollerton and Edwinstowe; Creswell Crags; Finningley; Misson; Plumtree; East and West Leake; Cotgrave.

- L. sulphurella** Zett. Common on grasses, etc., July to September. South Leverton (*Thornley*). Beeston; Gotham (*Robinson*). Sherwood Forest about Edwinstowe and Ollerton; Creswell Crags; Cuckney Hay Wood; Aldercar Wood; Quarry Banks, Linby; Bulwell Forest; Epperstone Park; Langford Moor; East Leake; Crow Wood Hill, West Leake; Nottingham; etc.

CICADULA Fieb.

- C. septemnotata** Fall. Thorney, August 1913 (*L. A. Carr*). Aldercar Wood, Newstead, 29. vii. 1914.
- C. variata** Fall. East Leake, 3. vii. 1911; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Quarry Banks, Linby, 20. vii. 1914.
- C. sexnotata** Fall. On grasses, very common throughout the county.
- C. fieberi** Edw. Quarry Banks, Linby, several specimens by general sweeping, 18. ix. 1912; Widmerpool, on the Foss Road, 25. ix. 1912.

BALCLUTHA Kirk.

- B. punctata** Thunb. Langford Moor, two specimens by sweeping, 14. viii. 1914.

ALEBRA Fieb.

- A. albostriella** Fall. Common everywhere on *Quercus*, *Betula*, *Corylus*, *Acer campestre*, *Ulmus* and other trees.
- forma *wahlbergi* Boh. Aspley Woods, 28. viii. 1912; Thorney.
- forma *fulveola* H.-S. South Leverton, on *Quercus*, 21. vii. 1900 (*Thornley*). Sherwood Forest, Edwinstowe, on *Betula*, 1. vii. 1911 and 30. viii. 1912; Aspley Woods, 9. viii. 1912; North Collingham, 25. viii. 1913; Crow Wood Hill, West Leake, 9. viii. 1914.

DIKRANEURA Hardy.

- D. flavipennis** Zett. Near Newbound Mill, Teversall, by sweeping in marshy ground where *Carices* abound, four specimens, 26. vi. 1913.
- D. similis** Edw. Three specimens by sweeping in marshy ground near Newbound Mill, Teversall, 3. viii. 1912.

D. mollicula Boh. Quarry Banks, Linby, several specimens, 18. ix. 1912; Epperstone Park, 6. ix. 1913; Creswell Craggs, several, 22. ix. 1913.

D. variata Hdy. Quarry Banks, Linby, 18. ix. 1912; Sherwood Forest near Edwinstowe, swept from *Calluna*, etc., 30. viii. 1912 and 25. ix. 1913; Creswell Craggs, common, 22. ix. 1913.

EMPOASCA Walsh.

E. smaragdula Fall. Common on *Salix*, *Alnus* and *Betula*, June to October. Sherwood Forest, Edwinstowe and Ollerton; Warsop; Cuckney Hay Wood, Nether Langwith; near Newbound Mill, Teversall; Aldercar Wood, Newstead; Quarry Banks, Linby; Bulwell Forest; Arnold; Aspley Woods; Upton near Southwell; Langford Moor; East Leake; Widmerpool; etc.

E. populi Edw. Attenborough, beaten from *Salix alba* and Lombardy poplar, 14. viii. 1913; Normanton-on-the-Wolds, from *Populus canescens*, 12. viii. 1914; near Park Drain station, Misson, from *Salix*, 22. ix. 1914.

CHLORITA Fieb.

C. flavescens Fab. Aspley Woods, several specimens, 9. viii. 1912.

C. solani-tuberosi Koll. Aspley Woods, 3. iv., and Carcolston, 11. iv. 1912, beaten commonly from conifers in both places; Epperstone Park, beaten from oak, 6. ix. 1913.

C. viridula Fall. South Leverton (*Thornley*). Linby, 18. ix. 1912; Widmerpool, 25. ix. 1912; Langford Moor, 14. viii. 1914.

EUPTERYX Curt.

E. vittatus L. Nottingham; Aspley Woods; Bulwell Forest; Linby; Aldercar Wood, Newstead; Cuckney Hay Wood, Nether Langwith; Thorney; all June to Sept., 1912—14.

E. notatus Curt. Plumtree, two specimens swept from grasses in dry pasture, 3. ix. 1913.

E. urticae Fab. Common on nettles, June to October. South Leverton (*Thornley*). Lambley; Gotham; Cotgrave; Bilborough; Nuthall (*Robinson*). Aspley Woods, with the form *leucocnema* Oshn.; Bulwell Forest; Linby; Park Drain, Misson; Sherwood Forest near Edwinstowe; Creswell Craggs,

abundant on *Parietaria officinalis*; North Collingham, on *Salix*; Upton near Southwell; Normanton-on-the-Wolds; Widmerpool; Crow Wood Hill, West Leake; Epperstone Park.

E. stachydearum Hardy. South Leverton; Mapperley, Nottingham (*Thornley*). Sherwood, Nottingham, on *Mentha* and *Stachys sylvatica*; Aspley Woods; Linby, on *Labiatae*; Fiskerton, on *Stachys sylvatica*; Creswell Crags, on *Calamintha clinopodium*; Sherwood Forest near Edwinstowe. June to October.

E. collinus Flor. Sherwood, Nottingham, 2. ix. 1913.

E. melissae Curt. On sage, mint and thyme in gardens, abundant, July to Sept. Kingston Hall gardens (*Thornley*). Mapperley, Nottingham; Linby; Upton near Southwell; Edwinstowe.

E. auratus L. Very common on nettles, etc., May to October. South Leverton (*Thornley*). Lambley; Radcliffe-on-Trent; Gotham; Bilborough; East Bridgford; Cotgrave (*Robinson*). Nottingham, on nettles, and in garden on hollyhocks; Aspley Woods; Arnold; Attenborough; Linby; near Newbound Mill, Teversall; Sherwood Forest near Edwinstowe; Creswell Crags; Park Drain, Misson; East Leake; Widmerpool; Normanton-on-the-Wolds; Epperstone Park; etc.

E. atropunctatus Goeze. Rather common, May to September. Kingston-upon-Soar, on potatoes in garden (*Thornley*). Arnold; Strelley (*Robinson*). Nottingham, common; near Newbound Mill, Teversall; Aspley Woods; Normanton-on-the-Wolds; etc.

E. signatipennis Boh. Fiskerton, several specimens taken by sweeping *Spiraea ulmaria*, etc., in marshy ground by side of Midland Railway, 25. vii. 1913; Aldercar Wood, Newstead, probably from *Spiraea*, 29. vii. 1914.

E. abrotani Dougl. In gardens on *Artemisia abrotanum*, common where it occurs. South Leverton, 9. x. 1900 (*Thornley*). Nottingham, 25. ix. and 10. x. 1914 (*Robinson*). Upton near Southwell, 12. vii. 1913.

E. filicum Newm. Sherwood Rise, Nottingham, on *Lastrea filix-mas* in garden, 8. vi. 1912. and very common on ferns in greenhouse during September; Aspley Woods, 27. vi. and 9. viii. 1912; Crow Wood Hill, West Leake, 14. vii. 1912.

E. pulchellus Fall. On oak, common, June to September. South Leverton (*Thornley*). Sherwood Forest, Edwinstowe; Aspley Woods, Nottingham; Quarry Banks, Linby; near Newbound Mill, Teversall; Thorney; North Collingham; Upton near Southwell; Fiskerton; Epperstone Park; East and West Leake; Widmerpool.

E. concinna Germ. On oak, frequent, June to September. Sherwood Forest near Edwinstowe; Aldercar Wood, Newstead; Aspley Woods; Upton; Fiskerton; East and West Leake; Widmerpool.

TYPHLOCYBA Germ.

T. jucunda H.-S. Quarry Banks, Linby, on *Alnus glutinosa*, 20. vii. 1914.

T. debilis Dougl. Foss Road, Widmerpool, both sexes beaten from hedges, 25. ix. 1912.

T. ulmi L. On elm, abundant everywhere.

T. tenerrima H.-S. On *Rubus*, fairly common, July to September. Aspley Woods; Bulwell Forest; Arnold; Linby; East and West Leake.

T. aurovittata Dougl. Foss Road, Widmerpool, beaten from hedges, 25. ix. 1912.

T. douglasi Edw. On oak, elm, beech, hawthorn, etc., often common, June to September. Nottingham; Bulwell Hall; Epperstone Park; Fiskerton; Upton; North Collingham; East Leake.

T. crataegi Dougl. Common on hawthorn hedges. Sherwood, Nottingham, 17. vii.—20. viii.; Arnold, 24. vii.; Upton, 30. vi.; Attenborough, on *Urtica dioica*, 14. viii.—all 1913.

T. lethierryi Edw. Nottingham; Arnold; Bulwell Forest; Bulwell Hall Park; Foss Road, Widmerpool; Creswell Crags. Chiefly beaten from elm, often commonly. August to October, 1912-13.

T. rosae L. South Leverton, common in vicarage garden, 21. vii. 1900 (*Thornley*). Nottingham, common on rose-bushes in gardens; Sherwood Forest about Edwinstowe and Ollerton; Creswell Crags; etc. June to October.

T. salicicola Edw. Beaten from *Salix*. West Leake, 20. x. 1912; Bulwell Forest, 21. vii. 1913.

- T. avellanae** Edw. Beaten from *Corylus avellana*, July to September, 1912-13. Sherwood, Nottingham; Aspley Woods; East Leake; Widmerpool.
- T. frustrator** Edw. Widmerpool, by beating mixed hedges on Foss Road, 25. ix. 1912; Creswell Crags, 22. ix. 1913.
- T. prunicola** Edw. Both sexes beaten commonly from plum trees in old gardens near top of Private Road, Sherwood, Nottingham, 17. vii. 1913.
- T. plebeja** Edw. Bulwell Forest, on *Alnus*, 21. vii; Arnold, on *Quercus* and *Tilia*, 24. vii.; Fiskerton, on *Quercus*, 25. vii.; Epperstone Park, common on *Ulmus* and *Corylus*, 6. ix.—all 1913.
- T. distincta** Edw. Aspley Woods near Nottingham, ♂♂, 1912.
- T. carri** Edw. Sherwood Forest near Edwinstowe, both sexes, 30. viii. 1912; Arnold, one ♂ from oak, 13. viii. 1913.
- T. diversa** Edw. Aspley Woods near Nottingham, both sexes, 4. vii. 1912.
- [The last five of the preceding species were described as new by Mr. J. Edwards in the *Entomologist's Monthly Magazine* for July 1914, pp. 168—171, from specimens collected by me in Nottinghamshire: they have not, as yet, been recorded from any other British county. J.W.C.]
- T. quercus** Fab. South Leverton, common on oak, 21. vii. 1900 (*Thornley*). Plumtree (*Robinson*). Nottingham, common on plum trees in gardens at Sherwood Rise, Sherwood and Mapperley, June to August; Aspley Woods, on oak; Sherwood Forest near Edwinstowe, on oak; East Leake; Langford Moor; North Collingham, on oak; Upton near Southwell, on hawthorn; Aldercar Wood, Newstead. June to September.
- T. nitidula** Fab. Aspley Woods, 26. vii. 1912; Widmerpool, 18. viii. 1913; West Leake Hills, 21. viii. 1913; North Collingham, 25. viii. 1913; Creswell Crags, 22. ix. 1913;—beaten from *Ulmus montana* in each locality. Epperstone Park, from oak, 6. ix. 1913.
- T. geometrica** Schr. Bulwell Forest, 8—20. vii. 1912-13; near Newbound Mill, Teversall, 3. viii. 1912; Quarry Banks, Linby, 18. ix. 1912; Aldercar Wood, Newstead, 29. vii. and 13. viii. 1914. Beaten from *Alnus glutinosa* in all above localities.

ZYGINA Fieb.

- Z. coryli** Toll. Aspley Woods, 9. vii. and 9. viii. 1912; Sherwood, Nottingham, 20. viii. 1913, on plum and hawthorn; Widmerpool, beaten from *Quercus* and *Ulmus montana*, 18. viii. 1913.
- Z. flammigera** Geoffr. South Leverton, very common in vicarage garden on hedges in autumn, and abundant on *Mahonia* and *Buxus*, 16. ii. 1899 (*Thornley*). Creswell Crags, beaten from hawthorn, 22. ix. 1913.
- Z. hyperici** H.-S. Creswell Crags, 22. ix. 1913.
- Z. parvula** Boh. Langford Moor near Newark, 16. viii. 1912.
- Z. scutellaris** H.-S. Creswell Crags, 22. ix. 1913.

FULGORIDAE.

CIXIUS Latr.

- C. pilosus** Ol. Treswell Wood, common, 29. v. 1899; Windmill Lane, North Leverton, common, 18. v. 1901, and the form *albicincta*, 27. v. 1901 (*Thornley*). Widmerpool, 13. v. 1899; Edwinstowe, Sherwood Forest, 12. vi. 1912; East Leake, 9. vi. 1912; Crow Wood Hill, West Leake, common, 14. vi. 1913, 17—19. v. 1914; Upton near Southwell, beaten from hawthorn, 30. vi. 1913.
- C. nervosus** L. Common. Cinder-hill; Papplewick (*Robinson*). Thorney (*L. A. Carr*). Aspley Woods near Nottingham; Beauvale Woods; Linby; Kirkby-in-Ashfield; near Newbound Mill, Teversall; Cuckney Hay Wood, Nether Langwith; Sherwood Forest near Edwinstowe; Langford Moor; Crow Wood Hill, West Leake; Epperstone Park; Widmerpool; Fiskerton. Taken by sweeping all kinds of herbage, from June 1 to Sept. 25.
- C. brachycranus** Scott. Thorney (*L. A. Carr*). Epperstone Park, common, on *Pteris*, *Lastrea filix-mas*, *Salix*, *Quercus* and *Populus tremula*; North Collingham, on *Ulmus*; West Leake Hills; Widmerpool, on *Salix* and *Ulmus montana*. All taken in August and September, 1913.

MEGAMELUS Fieb.

- M. notulus** Germ. Quarry Banks, Linby, taken commonly by sweeping in marshy place, 18. ix. 1912.

STENOCRANUS Fieb.

- S. minutus** Fab. Treswell Wood (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi. 1912; Creswell Crags, abundant, 22. ix. 1913.

KELISIA Fieb.

- K. vittipennis** J. Sahl. Widmerpool, 18. viii. 1913; Plumtree, on grasses in dry pasture, 3. ix. 1913; Crow Wood Hill and West Leake Hills, 9. viii.—8. ix. 1914.

DELPHACINUS Fieb.

- D. mesomelas** Boh. Bulwell Forest, Nottingham, 21. vii. 1913.

EURYSA Fieb.

- E. lineata** Perr. Treswell Wood, 4. v. 1901 (*Thornley*).

CONOMELUS Fieb.

- C. limbatus** Fab. Common on rushes (*Juncus* spp.) in August and September. South Leverton (*Thornley*). Thorney (*L. A. Carr*). Quarry Banks, Linby; Cuckney Hay Wood, Nether Langwith; Finningley; Misson; Normanton-on-the-Wolds; Plumtree; Fiskerton; West Leake Hills; Widmerpool; North Collingham.

DELPHAX Fab.

- D. signoreti** Scott. Rolleston, 25. vii. 1913.
- D. pellucida** Fab. Common by sweeping grasses, June to September. Aspley Woods; Bulwell Forest; Aldercar Wood, Newstead; Cuckney Hay Wood, Nether Langwith; Sherwood Forest near Edwinstowe; North Collingham; Langford Moor; Epperstone Park; Fiskerton; Normanton-on-the-Wolds; Plumtree; East and West Leake.
- D. difficilis** Edw. South Leverton (*Thornley*). Crow Wood Hill, West Leake, common by sweeping grasses, etc., 19. v. 1914.
- D. discolor** Boh. Rather common in woods, etc., May to July. Aspley Woods, including the macropterous form;

the Dumbles, Kirkby-in-Ashfield; near Newbound Mill, Teversall; Warsop; Sherwood Forest near Ollerton; Upton; Crow Wood Hill, West Leake.

D. forcipata Boh. Treswell Wood, 29. v. 1899 (*Thornley*). Crow Wood Hill, West Leake, 19. v. 1914.

D. fairmairei Perr. Thorney (*L. A. Carr*). Quarry Banks, Linby, 18. ix. 1912; Cuckney Hay Wood, 11. viii. 1914; Sherwood Forest near Ollerton, June 1914; Langford Moor, 14. viii. 1914; Clipston Wolds, 12. viii. 1914.

D. brevipennis Boh. Thorney, very common, 15—19. viii. 1913 (*L. A. Carr*).

DICRANOTROPIS Fieb.

D. hamata Boh. Sherwood Forest near Ollerton and Edwinstowe, both sexes, including macropterous ♀ ♀, June and July 1912; East Leake, 30. vi. 1912 and 4. viii. 1914; Bulwell Forest, swept from *Galium verum* and *Festuca ovina*, 21. vii. 1913; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Aldercar Wood, Newstead, 29. vii. 1914; Thorney; Langford Moor, 14. viii. 1914.

STIROMA Fieb.

S. albomarginata Curt. Sherwood Forest near Ollerton; Crow Wood Hill, West Leake; 19. v.—27. vi. 1914.

S. affinis Fieb. Aspley Woods near Nottingham, 4. vii. 1912.

PSYLLIDAE.

LIVIA Latr.

L. juncorum Latr. On *Juncus*. Gotham (*Thornley*). Quarry Banks, Linby, 20. vii. 1914.

APHALARA Först.

A. picta Zett. East Leake, 4. viii. 1914.

PSYLLOPSIS F. Löw.

P. fraxinicola Först. Very common on ash, June to September. Nottingham; Arnold; Attenborough; Epperstone Park; Kirkby-in-Ashfield; Fiskerton; Upton; North Collingham, on ash and *Salix*; Widmerpool and Norman-ton-on-the-Wolds, on *Salix*.

P. fraxini L. On ash, locally abundant. Nottingham (*Thornley*). The Dumbles, Kirkby-in-Ashfield, 28. vi.; Upton, 30. vi.; Fiskerton, 25. vii.—1913; Aldercar Wood, Newstead, 29. vii. 1914.

P. discrepans Flor. Upton near Southwell, 30. vi. 1913. "This species, of which the present is the first British record, might be passed over as a small and faintly-marked form of *P. fraxini*, but is readily recognised by the forceps of the male which, in the lateral aspect, are broadly hatchet-shaped, and consequently very different from those of *P. fraxini* which, in a similar aspect, are club-shaped. I found a single male on the same card with eight or nine specimens of *P. fraxini* captured on ash by Prof. Carr" (*J. Edwards*).

PSYLLA F. Löw.

P. peregrina Först. Very common, June to September. South Leverton (*Thornley*). Edwinstowe, Sherwood Forest, on hawthorn; Nottingham, very common on apple-trees in garden at Sherwood; Upton, on hawthorn; Widmerpool, on hawthorn, elm and crab-apple; North Collingham, on hawthorn; West Leake Hills, on hawthorn; Fiskerton, abundant on *Pyrus malus*; Attenborough, on nettles.

P. costalis Scott *nec* Flor. This is merely the autumn colour-form of *P. peregrina*, according to Mr. J. Edwards. Sherwood, Nottingham, on hawthorn; Cuckney Hay Wood, Nether Langwith; Creswell Crags, on hawthorn; Sherwood Forest near Edwinstowe, abundant on old hawthorn trees; Normanton-on-the-Wolds, on *Salix*; Widmerpool, on hawthorn; West Leake Hills, very common on hawthorn; North Collingham, on hawthorn.

P. mali Schind. South Leverton (*Thornley*). Epperstone Park, on *Corylus avellana*, 6. ix. 1913.

P. visci Curt. Sherwood Forest, between Edwinstowe and Budby, on mistletoe growing on old hawthorn trees, 25. ix. 1913.

P. alni L. Abundant on *Alnus glutinosa*, June to September. Aspley Woods; Normanton-on-the-Wolds; Linby; Newstead; Kirkby-in-Ashfield; Newbound Mill, Teversall; Warsop; Ollerton.

P. försteri Flor. Locally common on *Alnus glutinosa*, June to September. Aspley Woods; Bulwell Forest; Aldercar Wood, Newstead; the Dumbles, Kirkby-in-Ashfield; near Newbound Mill, Teversall.

P. buxi L. Abundant on *Buxus*. Sherwood and Mapperley, Nottingham; Plumtree; Beauvale Woods; Upton near Southwell; Ollerton.

P. hartigii Flor. Sherwood Forest near Edwinstowe, ♀, 1. vii. 1911.

P. melanoneura Först. Sherwood, Nottingham, beaten from hawthorn and ash, 17. vii. 1913.

ARYTAENA Scott.

A. genistae Latr. Linby, very common on *Cytisus scoparius*, 18. ix. 1912; Creswell Crags, on *Ulex europaeus*, 22. ix. 1913; Aldercar Wood, Newstead, on *Cytisus*, 29. vii. and 18. viii. 1914.

TRIOZA Först.

T. albiventris Först. Cotgrave, 23. ix. 1913 (*Robinson*). Nottingham, 19. vi.; Bulwell Forest, 21. vii.; Oxtun Bogs, 24. iv.; Upton near Southwell, 30. vi. and 12. vii.; Fiskerton, on *Stachys sylvatica*, 25. vii.; North Collingham, on *Salix*, 25. viii.—all 1913.

T. urticae L. Common on *Urtica dioica*, June to November. South Leverton (*Thornley*). Nottingham; Bulwell Forest; Attenborough; Upton near Southwell; Fiskerton on *Salix viminalis*; East and West Leake.

T. galii Först. Upton near Southwell, 30. vi. 1913; Sherwood Forest near Ollerton, 17—27. vi. 1914.

APHIDAE.

The Aphides or Plant-lice have received so little attention in Nottinghamshire that only a meagre list of them can be given here. No attempt has yet been made to trace their distribution in the county and therefore localities are only given in the case of a few of the rarer species. The species enumerated below have mostly been taken at Worksop by Lady Robinson, but a few have been observed in Sherwood Forest and in the Retford and Nottingham districts by the Rev. A. Thornley and the writer.

Siphonophora rosae Réaum. Ubiquitous on roses.

„ *granaria* Kirby. On grasses.

„ *alliariae* Kock. On *Lapsana communis*.

„ *fragariae* Koch. On the strawberry.

„ *hieracii* Kalt. Worksop, on *Hieracium aurantiacum*.

- Siphonophora circumflexa* Buckt. Worksop, on 'Arum lilies' and Iris.
- „ *dirhoda* Walk. On rose.
- „ *pisi* Kalt. Worksop, on various species of cultivated *Spiraea*.
- „ *rubi* Kalt. On *Rubus* (blackberry and raspberry).
- „ *urticae* Kalt. On *Urtica dioica*.
- „ *sonchi* L. On *Centaurea nigra*.
- Phorodon humuli* Schrank. On hop (*Humulus lupulus*).
- Myzus cerasi* Fab. On cherry.
- „ *ribis* L. On currant and gooseberry bushes.
- Drepanosiphum platanoides* Schrank. On sycamore.
- Rhopalosiphum ribis* L. On black currant.
- „ *nymphaeae* L. Worksop, on water-lilies.
- „ *berberidis* Kalt. On *Berberis*.
- „ *dianthi* Schrank. On peach.
- Siphocoryne xylostei* Schrank. On honeysuckle.
- „ *foeniculi* Pass. On *Foeniculum vulgare* (fennel).
- Aphis brassicae* L. On cabbages, etc.
- „ *crataegi* Kalt. On hawthorn.
- „ *abietina* Walk. On spruce-fir.
- „ *mali* Fab. On pear, apple and crab.
- „ *penicillata* Buckt. Worksop, on *Epilobium montanum*.
- „ *pruni* Réaum. On plum.
- „ *hederae* Kalt. On ivy (*Hedera helix*).
- „ *rumicis* L.
- Hyalopterus pruni* Fab. On plum.
- „ *trirhodus* Walk. On rose.
- Chaitophorus aceris* L. On sycamore and horse-chestnut.
- Callipterus betulicola* Kalt. On birch.
- „ *coryli* Goetze. On *Corylus avellana*.
- „ *quercus* Kalt. On oak.
- Pterocallis juglandicola* Kalt. Kingston Park, on walnut.
- „ *tiliae* L. Abundant on lime.
- Phyllaphis fagi* L. On beech.
- Ptychodes juglandis* Frisch. Kingston Park, on walnut.
- Lachnus pinicolus* Kalt. On *Pinus*.
- „ *viminalis* Fonsc. On *Salix*.
- Schizoneura lanigera* Hausm. Abundant on apple trees.
- „ *ulmi* L. On elm.
- Cerataphis lataniae* Licht. Worksop, on *Cypripedium* in greenhouse.
- Pemphigus bursarius* Hartig. Forms galls on leaf-stalks of poplars.
- Chermes corticalis* Kalt. Worksop, on *Pinus austriacus*.
- „ *abietis* L. Produces cone-like galls on twigs of spruce-fir.
- „ *laricis* Hart. On larch.

COCCIDAE.

Aspidiotus hederæ Vall. Many young ♀ ♀ found on leaves of *Tacsonia exoniensis* in Rev. A. Thornley's conservatory at Mapperley, Nottingham, 18. xii. 1911.

Chionaspis salicis L. West Leake Hills, several young ash trees largely covered with it, 30. viii. 1912 (*Thornley*). Lowdham, on *Salix*, 12. i. 1912.

Mytilaspis pomorum Bouché. Lowdham, 12. i. 1912, common on apple, crab, pear and plum.

Lecanium hesperidum L. Nottingham, on leaves of *Laurus nobilis*, 12. ii. 1912, and on leaves of *Nerium oleander*, November, 1913.

L. capreæ L. Beeston, abundant on a hawthorn hedge, 20. v. 1909 (*Thornley*). Lowdham.

Kermes quercus L. "On July 15th [1902] Mr. Brockton Tomlin found the species in great numbers at Sherwood Forest, and from a freshly fallen tree obtained a fine series of females *in situ*" (*R. Newstead, Ent. Mo. Mag.*, March 1903, p. 58).

Cryptococcus fagi Baren. Mapperley, Nottingham, on trunks of beeches in St. Jude's churchyard, 1912 (*Thornley*).

ENDOPTERYGOTA.

Winged insects, the wing rudiments developing beneath the cuticle and remaining invisible until the pupal stage is reached. The metamorphosis is complete, the young being always unlike the adult. The last stage preceding the perfect insect is a pupa which does not feed and is usually quiescent.

NEUROPTERA.

Carnivorous insects with mouth-parts adapted for biting or piercing and sucking, conspicuous antennae, and four membranous net-veined wings, those of the two pairs being closely similar: in repose they meet at an angle over the back like a roof.

The Order is represented in the British Isles by five Families. The *Sialidae* (Alder-flies) include only two British species, both belonging to the genus *Sialis*. *S. lutaria*, a sober looking insect

with a squarish black head, black body and pale brown wings, is very common amongst the vegetation about canals, slow streams and ponds. The larva is aquatic and carnivorous. The snake-flies (*Raphidiidae*) are easily recognised by the long constricted neck formed by the elongation of the prothorax and hinder part of the head. The larvae live under bark or in rotten wood and feed upon other larvae and small insects, etc., occurring in such situations. The *Hemerobiidae* (Lace-wing flies) and the *Chrysopidae* (Golden-eye flies) are useful as well as beautiful and delicate insects, inasmuch as their larvae feed exclusively on aphides or plant-lice whose juices they suck. The larvae of some species of both *Hemerobius* and *Chrysopa* have the curious habit of covering themselves with the empty skins of the aphides that they have sucked dry. The *Coniopterygidae* are minute insects whose wings and body are covered with a white powdery down. In some species the hind wings are much smaller than the fore wings. The antennae are long and slender.

Of the 53 British species of Neuroptera 34 have been taken in Nottinghamshire, and several others should yet be found. We are greatly indebted to Mr. Kenneth J. Morton, of Edinburgh, for constant and valuable help in the determination of these insects.

SIALIDAE.

SIALIS Latr.

S. lutaria L. Rivers, canals, ponds, etc., common throughout the county.

S. fuliginosa Pict. Eaton near Retford, 29. v. 1901.

RAPHIDIIDAE.

RAPHIDIA L.

R. notata Fab. Treswell Wood (*Thornley*). Clumber Park (*Lady Robinson*). Sherwood Forest near Edwinstowe, etc. (*Becher, Hardy, Carr*). Epperstone Park, 12. v. and 20. vi. 1912 (*Saunt*).

R. xanthostigma Schum. Treswell Wood (*Thornley*). Work-sop district (*Lady Robinson*). Langford Moor near Newark, 1904; Edwinstowe, Sherwood Forest, several specimens, 10—14. vi. 1912.

HEMEROBIIDAE.

SISYRA Burm.

S. fuscata Fab. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*). Attenborough, 21. v. 1914 (*Robinson*).

HEMEROBIUS L.

- H. striatellus** Klap. First recognised as a British species by Mr. K. J. Morton from a specimen sent from Nottinghamshire; it was taken in 1913, but the exact locality cannot now be ascertained [see Morton in *Entomologist*, Aug. 1914, p. 211]. First captured at Burton Joyce, 9. vii. 1904, and subsequently at Linby, 20. vii. 1914. (The Burton Joyce specimen was recorded in *The Entomologist*, Feb. 1914, p. 67, as *H. elegans* Steph., a species with which *H. striatellus* has hitherto been confused).
- [*H. inconspicuus* McLach. Clumber Park near Worksop, two specimens, 1908 (*Lady Robinson*). According to Mr. G. T. Porritt, who identified Lady Robinson's *Hemerobii*, there is considerable doubt as to this determination, and confirmation is therefore required before this can be claimed as a Notts. species.]
- H. micans** Oliv. Shireoaks, Worksop; Clumber Park (*Lady Robinson*). North and South Leverton; Treswell Wood (*Thornley*). Thorney, Aug. 1913; Epperstone Park, 6. ix. 1913.
- H. nitidulus** Fab. Epperstone Park, 6. ix. 1913; Sherwood Forest, Edwinstowe, 10. viii. 1914; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.
- H. humuli** L. Clumber Park (*Lady Robinson*). Worksop (*Houghton*). South Leverton (*Thornley*). Treswell Wood (*E. Shaw*). Nottingham, 14. viii.; Plumtree, 4. viii.—1914 (*F. M. Robinson*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Linby, 20. vii. 1914; Aldercar Wood, Newstead, 13. viii. 1914; Crow Wood Hill, West Leake, 27. v. 1913; Epperstone Park, 6. ix. 1913 and 17. v. 1914.
- H. lutescens** Fab. Common. Arnold; Bramcote (*Robinson*). Trowell; Tollerton (*Saunt*). Nottingham; Aldercar Wood, Newstead; the Dumbles, Kirkby-in-Ashfield; Sherwood Forest near Edwinstowe; Thorney; Epperstone Park; East Leake; West Leake Hills; Normanton-on-the-Wolds; Widmerpool; etc. Dates of capture range from April 27 to Sept. 24.
- H. orotypus** Walleng. Ollerton, 15. v. 1901 (*Rev. W. Becher*). Owthorpe, 28. viii. and 26. ix. 1914 (*Saunt*). Sherwood Forest near Edwinstowe, 25. ix. 1913; Aspley Woods near Nottingham, 9. viii. 1912.

- H. nervosus** Fab. Shireoaks (*Houghton*). Worksop (*Lady Robinson*). South Leverton (*Thornley*). Epperstone Park, 6. ix. 1913.
- H. subnebulosus** Steph. Common throughout the county : very common in Nottingham gardens, April to September.
- H. stigma** Steph. Worksop district (*Lady Robinson*).
- H. atrifrons** McLach. Worksop, 1908 (*Lady Robinson*). Owthorpe, 6. vi. 1914 (*Saunt*).
- H. concinnus** Steph. Worksop, 1908, common (*Lady Robinson*).
- H. quadrifasciatus** Reut. Worksop, 1908, common (*Lady Robinson*). Edwinstowe, Sherwood Forest, 10—14. vi. 1912 (*L. A. Carr*).

MICROMUS Ramb.

- M. paganus** L. Shireoaks (*Houghton*). Worksop (*H. F. Hodding*). Clumber Park (*Lady Robinson*). Treswell Wood (*Thornley*). Aspley Woods near Nottingham, 28. vi. and 26. vii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 (*Carr*). Bulwell, 28. v. 1914 (*F. M. Robinson*). Edwalton, 16. v. 1914 (*Saunt*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- M. angulatus** Steph. Sherwood Forest near Edwinstowe, two specimens, 25. ix. 1913.

CHRYSOPIDAE.

CHRYSOPA Leach.

- C. flava** Scop. Shireoaks (*Houghton*). Worksop (*Lady Robinson*). North and South Leverton and Treswell Wood (*Thornley and Shaw*). Holme Pierrepont, 1. vi. 1912 (*F. M. Robinson*). Caythorpe, Sept. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Nottingham, July and Aug. 1914.
- C. alba** L. Shireoaks (*Houghton*). Worksop (*Lady Robinson*). North Leverton (*Shaw*). South Leverton; Treswell Wood (*Thornley*). Nottingham; Epperstone Park, 22. vi. 1913 (*Saunt*). Stapleford (*Dawson*). Aldercar Wood, Newstead, 29. vii. 1914.
- C. tenella** Schnd. Shireoaks (*Houghton*). Worksop (*Lady Robinson*). Bulwell Hall Park, 8. vii. 1912; Nottingham, 24. viii. 1914.

- C. vulgaris** Schnd. Shireoaks (*Houghton*). South Leverton (*Thornley*). Stapleford (*Dawson*).
- C. septempunctata** Wesm. Shireoaks (*Houghton*). Worksop (*Lady Robinson*). North Leverton (*E. Shaw*). Nottingham, common on hawthorn trees in my garden on Mansfield Road, July 1903; Nottingham, July 1910—13 and June 1914; Ollerton, Sherwood Forest, July 1912 (*Carr*). Stapleford (*Dawson*).
- C. prasina** Ramb. South Leverton (*Thornley*). Worksop (*Lady Robinson*). Calverton, 14. vii. 1914 (*Saunt*). Sherwood Forest near Edwinstowe, 1. viii. 1911.
- C. ventralis** Curt. South Leverton (*Thornley*). Shireoaks (*Houghton*). Nottingham (*Saunt*).
- C. phyllochroma** Wesm. Shireoaks (*Houghton*). Worksop, common, 1908 (*Lady Robinson*). East Leake, 13. vi. 1912; Nottingham, July 1914.
- C. perla** L. Shireoaks (*Lady Robinson*). Worksop, 1913 (*H. E. Hodding*). South Leverton (*Thornley*). Treswell Wood (*Shaw*). Langford Moor near Newark, 29. vi. 1899; Budby Carr, Sherwood Forest, several specimens, 9. vii. 1903; Ollerton, June 1914 (*Carr*). Cotgrave, 21. vi. 1913; Owthorpe, 6.—20. vi. 1914 (*Saunt*). Stapleford (*Dawson*).

NOTHOCHRYSA McLach.

- N. capitata** Fab. Sherwood Forest, 11. vii. 1908 (*H. St. J. K. Donisthorpe*).

CONIOPTERYGIDAE.

CONWENTZIA Enderl.

- C. psociformis** Curt. Sherwood, Nottingham, 27. v. 1913
Warsop, 14. vii. 1913.

SEMIDALIS Enderl.

- S. aleyrodiformis** Steph. Nottingham, 1901; East Leake, 3. vii. 1911; Upton near Southwell, beaten from ash and oak, 30. vi. 1913; Fiskerton, from *Pyrus malus*, 25. vii. 1913.

CONIOPTERYX Hal.

- C. tineiformis** Steph. (= *lactea* Wesm.). Thorney, Aug. 1913 (*L. A. Carr*).

MECAPTERA.

This Order is a small one comprising only a single Family, the *Panorpidae* (Scorpion-flies), by many authors included in the Neuroptera. The Scorpion-flies are distinguished by the prominent beak-like prolongation of the head, and—in the males—by the terminal segments of the abdomen being curved up like the tail of a scorpion. The antennae are long and slender, and the wings narrow and shining, with conspicuous longitudinal neuration; the fore-wings are only very slightly larger than the others (*Boreus*, however, is wingless). The larvae are terrestrial and resemble those of the Saw-flies: both larvae and perfect insects are carnivorous. Only four species of *Panorpidae* occur in this country, and three of these are found in Nottinghamshire.

PANORPIDAE.

PANORPA L.

- P. communis** L. Worksop (*Lady Robinson*). South Leverton; Treswell Wood (*Thornley*). Aspley Woods; Thorney; Langford Moor; Sherwood Forest near Ollerton; Strelley; Radcliffe-on-Trent (*Carr*). Flawford near Ruddington; Edwalton; Epperstone Park (*Saunt*). Bestwood Park (*Hind*). June 12 to August 24.
- P. cognata** Ramb. Bulwell, 6. vii. 1912 (*F. M. Robinson*). Near Newbound Mill, Teversall, 3. viii. 1912; Thorney, two specimens, 15—19. viii. 1913.
- P. germanica** L. Common in woods throughout the county. May 11 to Sept. 19.

TRICHOPTERA (*Caddis-flies*).

The Trichoptera have the wings as well as the body covered with fine hairs: in repose the wings meet at an angle, roof-like, over the back, and this attitude combined with their hairy covering gives the insects a moth-like appearance. The hind-wings are rather shorter but broader than the fore-wings and have a folding anal area; the neuration is mainly longitudinal, the principal veins forking repeatedly while the cross-nervures are few. The antennae are long and slender. Caddis-flies have feeble powers of flight and are rarely found far from water. The larvae are aquatic and in most of the families are more or less caterpillar-like, but in some they are campodeiform (*i.e.*

having a general resemblance to the Thysanuran genus *Campodea*). Those of the former type inhabit portable cases constructed by themselves of small stones or shells, grains of sand, bits of stem and leaves of aquatic plants, etc., holding on by a pair of strong hooks borne on the hinder end of the body, while the head and thorax are protruded from the opposite end of the case. The larva pupates in its case, which has previously been closed up at the ends, the pupa resembling an immature imago except that it bears a pair of strong serrated mandibles—structures which are vestigial in the imago. Just before the final moult the pupa becomes active and cuts or saws its way through the case; it ascends some stem or other object in the water, or swims to the surface, the skin splits and the imago emerges. Most of the larvae of the campodeiform type do not form portable cases but live either free or in webs, or in loose structures formed of tiny stones and web attached to stones or other objects. The food of caddis-fly larvae is mainly vegetable, but other insects are occasionally devoured.

The Trichoptera show distinct affinities with the Lepidoptera and are probably the stock from which the latter have been derived.

The number of species of Trichoptera taken in Nottinghamshire is only 65 out of a total of 174 for the British Islands, but many more will doubtless be found when the Order is more systematically worked. Practically every species in the subjoined list has been determined by Mr. K. J. Morton, a leading authority on this interesting group of insects.

PHRYGANEIDAE.

NEURONIA Leach.

N. ruficrus Scop. Worksop (*Houghton*). Widmerpool, 23. vi. 1900.

PHRYGANEA L.

P. grandis L. Retford (*Thornley*). Shireoaks (*Houghton*). Trent Embankment, Nottingham, and by the Trent at Adbolton, Nottingham, 23—30. vi. 1913-14 (*H. Mottram*).

P. striata L. Wollaton, June 1911 (*Saunt*).

P. varia Fab. Shireoaks (*Houghton*).

LIMNOPHILIDAE.

COLPOTAULIUS Kol.

- C. incisus** Curt. Near the spring on Bulwell Forest, Nottingham, 8. viii. 1912 and 21. vii. 1913.

GRAMMOTAULIUS Kol.

- G. atomarius** Fab. Shireoaks (*Houghton*). Wellow (*Becher*). North and South Leverton (*Thornley and Shaw*). Sherwood Forest, Ollerton, July 1912.

GLYPHOTAELIUS Steph.

- G. pellucidus** Retz. South Leverton; Treswell (*E. Shaw*).

LIMNOPHILUS Leach.

- L. rhombicus** L. Shireoaks (*Houghton*). Stapleford (*Dawson*). Nottingham, at the Midland station, 19. viii. 1912 (*Saunt*).
- L. flavicornis** Fab. South Leverton (*Shaw*). By the Greet at Rolleston, 25. vii. 1913.
- L. marmoratus** Curt. Shireoaks (*Houghton*). South Leverton (*Thornley*).
- L. lunatus** Curt. Shireoaks (*Houghton*). South Leverton (*Thornley*). North Leverton; Cottam (*Shaw*). London Road, Nottingham, 17. v. 1912 (*Saunt*). Papplewick, 9. x. 1913 (*Robinson*). Attenborough, by the Trent, 14. viii. 1913; Creswell Crags, 22. ix. 1913; Sherwood Forest near Ollerton, June 1914.
- L. politus** McLach. Worksop (*Lady Robinson*). Cottam (*Shaw*). Stapleford (*Saunt and Dawson*).
- L. centralis** Curt. Mansfield, 1. vi. 1913 (*Saunt*).
- L. vittatus** Fab. North Leverton (*Shaw*). South Leverton; Treswell Wood (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Owthorpe, 26. ix. 1914 (*Saunt*). Epperstone Park, 6. ix. 1913.
- L. affinis** Curt. South Leverton (*Thornley*).
- L. auricula** Curt. Shireoaks (*Houghton*). North and South Leverton (*Thornley*). Rampton (*Shaw*). Thorney, several,

15—19. viii. 1913 (*L. A. Carr*). Epperstone Park, 6. ix. 1913; Nottingham; Crow Wood Hill, West Leake, 19. v. 1914.

L. bipunctatus Curt. Nottingham, 14. vi. 1914 (*Thornley*).

L. extricatus McLach. Worksop (*Lady Robinson*); in same locality, 1913 (*H. E. Hodding*). Mansfield, 1. vi. 1913; Wollaton, June 1911 (*Saunt*).

L. hirsutus Pict. Shireoaks (*Houghton*).

L. sparsus Curt. Shireoaks (*Houghton*). South Leverton (*Thornley*). Treswell Wood (*Shaw*).

L. fuscicornis Ramb. Burton Joyce, by the River Trent, 9. vii. 1904; Trent-side at Nottingham, 24. v. 1913 and 19. v. 1914.

ANABOLIA Steph.

A. nervosa Curt. Shireoaks (*Houghton*). Retford; South Leverton (*Thornley*). Edwinstowe (*Shaw*). Papplewick, 9. x. 1913 (*Robinson*). Radcliffe-on-Trent, 25. ix. 1913 (*Carr*). Stapleford (*Dawson*).

STENOPHYLAX Kol.

S. stellatus Curt. Shireoaks (*Houghton*).

S. latipennis Curt. [Taken in the county, but exact locality uncertain.]

S. permistus McLach. South Leverton (*Thornley*). Worksop, 1913 (*H. E. Hodding*). Epperstone Park, 19. v. 1901 (*Carr*). Nottingham (*Saunt*), and 28. v. 1912 (*Thornley*). Lambley Dumble, 4. x. 1906 (*Robinson*).

MICROPTERNA Stein.

M. sequax McLach. South Leverton (*Thornley*).

HALESUS Steph.

H. radiatus Curt. Worksop; Shireoaks (*Houghton*). Edwinstowe (*Shaw*). Nottingham, 9. x. 1913; Stapleford, 25. ix. 1914 (*Saunt*).

DRUSUS Steph.

D. annulatus Steph. Calverton, 5. ix. 1914 (*Saunt*).

CHAETOPTERYX Steph.

C. villosa Fab. West Leake, 20. x. 1912; Edwinstowe, 25. ix. 1913.

SERICOSTOMATIDAE.**NOTIDOBIA** Steph.

N. ciliaris L. Canal at Trowell, 16. v. 1905 (*Carr*). Canal near Tollerton, 25. v. 1911; Gamston near Nottingham, common by canal, 22. v. 1913 (*Robinson*).

GOËRA Leach.

G. pilosa Fab. Shireoaks (*Houghton*). Ollerton, 12. vi. 1904; Fiskerton, 31. v. 1905 (*Carr*). Holme Pierrepont, 22. vi. 1913 (*Saunt*).

SILO Curt.

S. pallipes Fab. Misterton (*Thornley*). Worksop (*Lady Robinson*). Near Newbound Mill, Teversall, common, 2. vii. 1903; Sherwood Forest, Ollerton, June 1913.

BRACHYCENTRUS Curt.

B. subnubilus Curt. Retford (*Thornley*). Trent-side at Nottingham, 9—26. v. 1913.

CRUNOECIA McLach.

C. irrorata Curt. Stream near Newbound Mill, Teversall, 26. vi. 1913.

LASIOCEPHALA Costa.

L. basalis Kol. Ollerton, 22—26. vii. 1912, ♀ ♀ (*L. A. Carr*).

LEPTOCERIDAE.**BERAEA** Steph.

B. pullata Curt. Several specimens by stream near Newbound Mill, Teversall, 26. vi. 1913.

MOLANNA Curt.

- M. angustata** Curt. Clumber Park (*Shaw*). Ollerton, July 1912 and June 1914 (*L. A. Carr*). Canal at Gamston near Nottingham, common, 22. v. 1913 (*Robinson*). Canal at Lenton, Nottingham, 25. v. 1905.

ODONTOCERUM Leach.

- O. albicorne** Scop. Shireoaks (*Houghton*).

LEPTOCERUS Leach.

- L. nigronervosus** Retz. Ratcliffe-upon-Soar, 10. vi. 1911 (*Saunt*). Radcliffe-on-Trent, flying commonly over surface of river, 25. v. 1912; Wilford, by the Trent, 6. vi. 1913; Nottingham, 27. v. 1914.
- L. alboguttatus** Hagen. Trent-side, Burton Joyce, 9. vii. 1904; Wilford, by the Trent, 23. vii. 1913.
- L. annulicornis** Steph. Ratcliffe-upon-Soar, 10. vi. 1911 (*Saunt*). Abundant by the Trent at Nottingham, Wilford, Radcliffe-on-Trent, etc., in May and June.
- L. aterrimus** Steph. Shireoaks (*Houghton*). Rampton (*Shaw*). Edwinstowe, 9. vii. 1903; Annesley Dumble, 4. vii. 1903; Bulwell Hall lake, common, 8. vii. 1912; Nottingham and Wilford, by the Trent, 20—23. vi. 1913, etc.
- L. cinereus** Curt. Common. Worksop (*Houghton*). West Drayton (*Shaw*). Thorney, Aug. 1913; Ollerton, June 1914 (*L. A. Carr*). Common by the Trent at Attenborough, Wilford, Nottingham, Radcliffe-on-Trent, Burton Joyce, etc.; taken from June 12 to August 27.
- L. albifrons** L. West Drayton (*Shaw*). Common by the Trent at Attenborough, Wilford, Radcliffe, etc., June 26 to August 14, 1913.
- L. bilineatus** L. Rampton (*Shaw*).
- L. dissimilis** Steph. Trent Embankment, Nottingham, July 1913 (*Saunt*).

MYSTACIDES Latr.

- M. nigra** L. Ratcliffe-upon-Soar, 10. vi. 1911 (*Saunt*). Gamston near Nottingham, 15. vi. 1911; West Bridgford, 18. vi. 1914 (*Robinson*). Trent-side, Wilford, 20. vi. 1913.

M. azurea L. Retford (*Thornley*). West Drayton (*Shaw*). Sherwood Forest near Ollerton, 17—27. vi. 1914 (*L. A. Carr*).

M. longicornis L. Worksop district (*Lady Robinson*). West Drayton (*Shaw*). Canal at Wollaton, 27. vi. 1903, and Cossall; Ollerton, July 1912 and June 1914 (*Carr*). Nottingham, by River Trent, 30. vi. 1914 (*H. Mottram*). Stapleford (*Dawson*).

TRIAENODES McLach.

T. bicolor Curt. Nottingham, 17. vi. 1914.

HYDROPSYCHIDAE.

HYDROPSYCHE Pict.

H. pellucidula Curt. Ollerton, July 1912 and June 1914 (*L. A. Carr*). Trent-side at Nottingham, Adbolton, Wilford, Radcliffe, etc., rather common in June.

H. instabilis Curt. Notts., probably Worksop district (*Houghton*).

H. angustipennis Curt. Worksop district (*Lady Robinson*). Retford (*Thornley*). Rampton; Cottam (*Shaw*). Bunny, 15. vi. 1901; Radcliffe-on-Trent, 19. vi. 1902.

H. guttata Pict. Very common. Marnham (*Thornley*). Trowell; Bunny, 15. vi. 1901; very abundant by the Trent at Nottingham, Wilford, Radcliffe, Burton Joyce, Hoveringham, Fiskerton, Kelham, etc. May 7 to September 27.

PHILOPOTAMUS Leach.

P. montanus Don. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

PLECTROCNEMIA Steph.

P. conspersa Curt. Worksop district (*Houghton*). Nottingham district (*Saunt*).

POLYCENTROPUS Curt.

P. flavomaculatus Pict. Retford (*Shaw*). Abundant by the Trent at Nottingham, Wilford, Attenborough, Radcliffe, Burton Joyce, etc. May 15 to Aug. 27.

CRYNUS Steph.

- C. trimaculatus** Curt. West Drayton (*Shaw*). Trent-side, Nottingham, 21. vi. 1913 and 27. v. 1914; Wilford, 29. vii. and 27. viii. 1913; Attenborough, 14. viii. 1913.
- C. flavidus** McLach. Nottingham, by the Trent, 30. vi. 1914 (*H. Mottram*).

TINODES Leach.

- T. waeneri** L. Worksop; Shireoaks (*Houghton*). Osberton near Worksop (*Shaw*). Ollerton, July 1912 and June 1914; Wilford, 27. viii. 1913.

LYPE McLach.

- L. phaeopa** Steph. By the Trent at Nottingham and Wilford, fairly common, 18. v.—18. vi. 1913.

RHYACOPHILIDAE.

RHYACOPHILA Pict.

- R. dorsalis** Curt. Common by the Trent at Nottingham, April 23 to May 7, and one on May 22, 1913 (*Mottram, Carr*). Radcliffe-on-Trent, 22. v. 1913 (*Robinson*).

HYDROPTILIDAE.

AGRAYLEA Curt.

- A. multipunctata** Curt. Rampton (*E. Shaw*). Pool by the Trent near Midland Railway bridge, Nottingham, rather common, 15. v. 1906.

HYDROPTILA Dalm.

- H. maclachlani** Klap. Burton Joyce, under stones by edge of river, 9. vii. 1904; Trent-side, Nottingham, 23, 24. iv. 1913.
- H. forcipata** Eaton. Trent-side, Nottingham, 19—24. v. 1913.

LEPIDOPTERA (Butterflies and Moths).

Insects whose wings and bodies are covered with flattened scales giving rise to the characteristic and often brilliantly coloured patterns which make the members of this Order such favourite objects with collectors. The fore-wings are larger than the hind-wings; the neuration is mainly longitudinal with few cross-nervures; in the majority of cases the fore and hind wings of each side are joined when extended by a bristle—the *frenulum*—projecting from the base of the hind wing and fitting into a flap or group of stiff hairs on the under surface of the fore wing. The head bears a pair of very large compound eyes, and long antennae with many segments; the mandibles are usually vestigial or absent, and the first pair of maxillae are elongated and grooved on their inner surfaces so as to form when in contact a long tubular proboscis: by its means the insect sucks from flowers the nectar which constitutes its food. Some Lepidoptera, however, take no food in the perfect state. The metamorphosis is complete. The larvae are elongate caterpillars with three pairs of thoracic legs and, in addition, several—usually five—pairs of tubular abdominal ‘prolegs’; the mandibles are large and powerful, and adapted for eating the leaves or even, in some cases, the solid wood of plants. The pupa or ‘chrysalis’ is passive, and the appendages are closely adherent to the body; it may be exposed, or concealed in a cocoon of silk with which extraneous materials are sometimes incorporated.

The time-honoured division of the Lepidoptera into Butterflies (*Rhopalocera*) and Moths (*Heterocera*) is a convenient one, but is perhaps hardly defensible on scientific grounds. Butterflies have the antennae clubbed at the ends and there is no frenulum on the hind wings: in the moths the antennae are very rarely clubbed, but when they are, as well as in the great majority of moths, a frenulum is present.

The Order is a very large one, the number of species at present known being probably at least 50,000. It is divided into more than 50 Families, of which 30 are represented in the British Isles. Over 2,000 species are British, and about 920 have been recorded on good authority for Nottinghamshire.

The Lepidoptera have as usual, owing to their attractive appearance, received more attention from Nottinghamshire collectors than other Orders of insects; but although our knowledge of the butterflies and larger moths is now fairly complete, much still remains to be done before anything like an exhaustive list of the smaller and more obscure species can be given. The earliest

published account of Nottinghamshire Lepidoptera is contained in White's *Worksop, the Dukery, and Sherwood Forest*, published in 1875. In this work two lists are given, one by W. J. Sterland of "Lepidoptera taken in Sherwood Forest by the late John Trueman"; the other, by R. E. Brameld, enumerates the species captured by himself "in or about Sherwood Forest, from 1859 to 1874." Sterland's list, although it professes to include only those species which Trueman himself collected within the limits of the Forest, contains so many improbable records that one is forced to the conclusion that numerous species are included which were collected by Trueman in other parts of the kingdom or received by him from correspondents. I have therefore felt compelled to ignore many of Sterland's records unless confirmed by Brameld or later observers. A further list of Sherwood Forest Lepidoptera was published in 1901 by Mr. J. R. Hardy (*Manchester Memoirs*, vol. 45), and many scattered notes on the Lepidoptera of this and other parts of Nottinghamshire have appeared from time to time in the various Entomological journals.

In addition to the information derived from these sources I have received much help from numerous entomological friends and correspondents. My thanks are especially due to Lady Robinson of Worksop Manor, whose researches in the Worksop district and Sherwood Forest have resulted in the addition of many new species to the county records; to the Rev. Alfred Thornley, whose extensive knowledge of the insect fauna of Nottinghamshire has been freely placed at my disposal; and also to the Rev. E. G. Alderson, the Rev. W. Becher, and Messrs. B. A. Bower, W. Daws, J. R. Hardy, G. Henderson, J. T. Houghton, A. R. Leivers, D. H. Pearson, G. Pike, J. W. Saunt, A. Simmons, S. A. Wallis and others.

The nomenclature and arrangement adopted in this list are, as far as the Hepialidae, mainly those of South's *Butterflies and Moths of the British Isles* which again are founded upon Staudinger and Rebel's *Catalog der Lepidopteren des Palaearctischen Faunengebietes*, but in some cases the sequence of the families as given in South's work has been varied. For the later families, from the Pyralidae onwards, which are not included in South's volumes, the *Catalog* has been followed.

RHOPALOCERA (BUTTERFLIES).

PAPILIONIDAE.

[*Papilio machaon* L. William Howitt, in "*The Book of the Seasons*," states that the Swallow-tail was "once taken at

Newark-on-Trent, and at Welbeck." Assuming the statement to be correct the specimens were presumably imported].

[*Agrotia crataegi* L. The claim of this beautiful insect to rank as a Notts. species rests solely upon Sterland's statement that "a single specimen of the black-veined white (*P. crataegi*) was taken by J. Trueman, but he does not give in his memoranda the precise locality, though I gather it was in Thoresby Park." In view of the southern range of this species its occurrence in Notts. can hardly be accepted, and the record is probably due to some misconception].

PIERIDÆ.

PIERIS Schrk.

P. brassicae L. Generally very plentiful in all parts of the county, but in some seasons rather scarce. The spring brood seems to be usually the larger in point of numbers. The earliest and latest dates recorded for the perfect insect are March 28 and Sept. 10. The larvae have been observed feeding gregariously upon horse radish (*Cochlearia Armoracia*), canary creeper (*Tropaeolum canariense*), and the common garden *Tropaeolum* ("Nasturtium"), as well as on the more usual cabbages and cauliflowers.

P. rapae L. Abundant throughout the county, the earliest and latest recorded dates being March 20 and Oct. 1. The larva is very partial to the common mignonette (*Roseta*) in Nottingham gardens, and has also been seen feeding upon charlock and horse radish, as well as upon the various forms of cabbage.

P. napi L. Distributed throughout the county, in most districts as commonly as *P. rapae*. Though plentiful enough in gardens and meadows it appears to be rather more partial to hedgerows and the ridings of woods than are the last two species. Earliest date observed, April 11.

EUCHLOË Hüb. (*Anthocaris* Bdv.).

E. cardamines L. Universally distributed in the county, and in some seasons very plentiful, frequenting the country lanes and wood ridings. The favourite food plants in this district appear to be charlock (*Brassica sinapistrum*) and garlic mustard (*Sisymbrium alliaria*).

LEPTIDIA Billbg. (= *Leucophasia* Steph.).

- L. sinapis** L. Long extinct in Nottinghamshire, if ever really indigenous. It used to occur occasionally in Sherwood Forest, according to Sterland, and a single specimen was taken at Newark many years ago (*G. Gascoyne* in *Newman's British Butterflies*.)

COLIAS (F.) Leach.

- C. hyale** L. Usually very rare, but occurs in small numbers at wide intervals. The earliest records are—Sherwood Forest, several times (*Sterland*); Nottingham, 1859 (*W. H. Smith* in *Ent. Week. Intell.*, vii. 4). More recent occurrences are—several in the Mansfield district, 1875 (*Daws*); three specimens at Normanton, near Southwell, 1877 (*Rev. W. Becher*). In 1900 two specimens were taken at Bestwood on August 12; four on the Foss Road near Cotgrave, August 29—31; and one at Upper Broughton on Sept. 5. The last of which I have a record was taken near Plumtree in 1901.
- C. edusa** Fab. Of much more frequent occurrence than the last, occasionally becoming quite common, but very uncertain and erratic. In 1858 over a dozen specimens were taken at Newark (*Gascoyne*), and in the following year it occurred at Nottingham and commonly at Mansfield. It was taken at Nottingham in 1875, and in 1877 occurred in profusion all over the county. A few specimens were seen in various localities in 1878 and 1883, a number in 1885 and 1889, and in 1892 it again appeared in numbers in every part of the county. In 1895 it occurred about Mansfield, accompanied by the variety *helice* (*Daws*), but was not generally common; and there are no further records until 1900, when it reappeared in considerable numbers and in many localities, even penetrating into Nottingham gardens. On the Foss Road near Cotgrave it was so abundant that one collector (Mr. A. Simmons) captured 50 specimens in perfect condition in two hours on August 18, and it was still common there up to September 6. One was taken in the same locality on July 6, 1912, by Mr. J. W. Saunt, and on August 18, 1913. I saw a specimen on the Foss Road near Widmerpool station: others were subsequently seen in the same neighbourhood.

GONEPTERYX Leach.

- G. rhamni** L. Occurs somewhat sparingly throughout the county but is occasionally quite common, as it was in 1900.

when it occurred throughout the length and breadth of Nottinghamshire.

NYMPHALIDAE.

NYMPHALINAE.

APATURA Fab.

- A. iris** L. The Purple Emperor is now very rare and has not been taken recently. This may be due, however, to a decrease in the number of local entomologists rather than of the butterfly. "Has been seen and taken many times in various parts of the district [Sherwood Forest]. I have one in my collection, a female, which was taken by a boy on the ground in Risebrigg Lane near Rufford; and a few years ago 16 or 17 were seen within the course of a week at the end of Wellow Wood, but only 3 or 4 were taken. J. True-man took several in the Forest" (*Sterland*). A fine female was taken in 1859 inside a pigstye near the edge of Wellow Wood, and one in the same year near Mansfield (*Brameld*). Occasionally near Newark (*Gascoyne*, in *Newman's Br. Butt.*). Repeatedly at Langford Moor near Newark (*Tomlinson*). Two, ♂ and ♀, taken at *Cossus*-borings in old oaks in the Forest close to Edwinstowe, 13. vii. 1874; one ♀ captured and two others seen in same place, 19. vii. 1875 (*Hardy*). Used to be taken in the Winkburn Woods, but I have not heard of it lately (*Becher*). A few specimens have been seen flying over the tops of the oaks in Thieves Wood near Mansfield, one as lately as 1895 (*Daws*).

POLYGONIA Hübn.

- P. c-album** L. Appears to have been not very uncommon formerly, but is now very rare. According to *Sterland* it was 'plentiful' in Sherwood Forest; and it was 'not very uncommon at Southwell' within the recollection of Rev. W. Becher. There are published records of its occurrence at Mansfield in 1857 (*W. H. Smith*) and 1859 (*Brameld*), and up to within recent years odd specimens have occasionally turned up in the same place and at Thieves Wood (*Daws*). Other recorded localities are Warsop and Ollerton (*Brameld*) and Newark (*Gascoyne*). The most recent capture of which I have a note is of a worn specimen taken in Park House gardens, Worksop, 15. ix. 1893 by Miss E. M. Alderson (now Lady Robinson).

VANESSA Ochs.

- V. polychloros** L. There are old records of the 'Large Tortoise-shell' for Nottingham, Newark, Ollerton and Warsop, and, according to Sterland, it was 'frequent' in Sherwood Forest. In more recent times it has been taken in Sherwood Forest by J. R. Hardy, and at Mansfield several times, 1876—1884 (*Daws*). Several fine specimens were seen, and one taken, in Park Place, Worksop, in 1889; one on Sparken Hill, Worksop; and one on 9. iv. 1894 in the orchard at Park House, Worksop (*Lady Robinson*). One specimen on a thistle-head near Widmerpool in August 1893 (*Leivers*).
- V. urticae** L. The 'Small Tortoise-shell' is very common and universally distributed in Nottinghamshire.
- V. io** L. Not common, and uncertain in its appearance, but records numerous and from all parts of the county. In August and September 1900 it was quite common, especially on the Foss Road between Cotgrave and Widmerpool.
- V. antiopa** L. Records of the occurrence of this fine species in Nottinghamshire are fairly numerous. One at Worksop and one at Southwell in 1846, and one taken some years before near Nottingham (*J. Wolley*). One in Sherwood Forest in Sept. 1858 (*Wilson*); four captured in the Forest in 1860—two at Welbeck by J. Trueman, and two others near Edwinstowe (*Sterland*). One was seen in Sherwood Forest in August 1872, and others heard of from residents at Edwinstowe (*H. Birchall*). "In 1860 this species was common about Mansfield. I have two taken here. A nice series was taken by the late Lady Walker at Berry Hill: they were feeding on fallen ripe plums. They were again fairly numerous in 1864" (*Daws*). Brameld reports 'several specimens taken in Nottinghamshire in 1872'; and lastly the Nottingham papers, in or about 1890, reported that a specimen of the 'Camberwell Beauty' had been seen flying in a road in the city.

PYRAMEIS Hübn.

- P. cardui** L. Usually very scarce and in some seasons not seen at all, but in others just as common—particularly in 'Edusa years.' From 1875 to 1880 it was very plentiful round Southwell (*Henderson*). Extremely abundant at Nottingham in August 1883 (*Wright*). Plentiful in some seasons about Mansfield, e.g. 1887, 1898 (*Daws*). Occasional about Worksop, Carlton-in-Lindrick, Clumber, etc. (*Lady Robinson*).

Fairly common near Edwinstowe, 26. viii. 1892, and in some localities quite abundant in the late summer of that year. Again common throughout the county in 1900, especially on the Foss Road between Cotgrave and Widmerpool: also in 1903; since then seen sparingly most seasons about West Leake and Kingston-upon-Soar by Rev. A. Thornley and myself, and at Owthorpe in 1907 and Clipston in 1908. Abundant on the Foss Road between Cotgrave and Widmerpool in 1914, and seen also at Linby.

- P. atalanta** L. Generally distributed and moderately common most years, but in some seasons quite abundant. One was seen on the wing on June 10, 1899, and on several subsequent days, at South Leverton (*Thornley*), and "in 1900 *atalanta* was flying at Mansfield in December" (*Daws*).

ARGYNNIS Fab.

- A. paphia** L. Much rarer now than formerly. It used to be not at all uncommon in Sherwood Forest, according to Sterland, but Brameld speaks of it as 'rare.' It has been taken there in recent years by J. R. Hardy, in the Birklands by A. R. Leivers, and in Wellow Park by Rev. W. Becher. Used to swarm in Thieves and Harlow Woods near Mansfield (*Daws*). Treswell Wood near Retford, several specimens on 5. viii. 1901 and subsequently (*Thornley*). Single specimens have been seen at Rowhoe Wood, Widmerpool, and on the adjoining Foss Road, and in the Owthorpe and Bunny Woods (*Leivers*). Woods about West Leake and Gotham, and in Kingston Park, singly, in 1905, 1906 and later (*Thornley*). Plumtree and Widmerpool Aug. 1912 (*Saunt*).
- A. adippe** L. Still fairly frequent in some parts of Sherwood Forest, and formerly not uncommon in many places where it is now scarce. About a dozen specimens were taken in the Forest in June 1868 by R. and W. Tyrer. 'Plentifully in Clumber Park' (*Brameld*). Common in Clumber Park; taken also at Carburton, and in Welbeck Park (*Lady Robinson*). Very common some years in Clumber Park (*Rev. E. G. Alderson*). Occasionally near Ollerton (*Becher*) and in the Birklands (*Leivers*); and I have taken it from ragwort flowers in Budby Carr. Thieves and Harlow Woods, but not so common since 1890 (*Daws*). Gotham Hills, one specimen, 5. viii. 1906 (*F. Wakerley*).

Mr. D. H. Pearson has bred this species from larvae found on dog-violet at Newstead.

- A. aglaia** L. Scarce. Frequent in Sherwood Forest (*Sterland*); formerly common there, now much less so (*Brameld*). Thieves and Harlow Woods: very few seen since 1890 (*Daws*). Two specimens at Thorney in 1894 (*Henderson*). A few specimens may be seen at Bunny Wood nearly every year (*Leivers*, 1901).
- A. euphrosyne** L. Very common in Sherwood Forest (*Brameld*). Formerly common near the Lime Avenue in Clumber Park with *A. selene*, but not seen there for some years (*E. G. Alderson*, 1901). Fairly common in Wellow Park (*Becher*). Common at Thorney in a small wood not far from Drinsey Nook in June 1891-2-3-4 (*Henderson*). Several in Markbush Wood, Thorney, 27. v. 1900; Wigsley Wood, fairly plentiful, 26. v. 1896; Langford Moor near Newark (*Carr*). Common at Newstead, 4. vi. 1883 (*Wright*). Taken commonly in Thieves and Harlow Woods: not so common of late years, *i.e.* since about 1890 (*Daws*). Owthorpe, 1912 (*Saunt*).
- A. selene** Schiff. Common at Clumber (*Brameld*). Clumber Park, Carburton, etc., generally one or two seen each season (*Lady Robinson*). Several specimens taken in a small wood at Thorney in June 1893-4 (*Henderson*). Thieves and Harlow Woods near Mansfield, not so frequent of late years (*Daws*).

"All the Argynnidae have been rarer in this district since the trees grew up; they used to swarm in the woods named"—*i.e.* Thieves and Harlow Woods (*Daws*, Mansfield, 1901).

SATYRINAE.

MELITAEA Fab.

- M. aurinia** Rott. Very rare. Taken several times in Sherwood Forest by J. Trueman, according to *Sterland*, and Miss Alderson captured a specimen on the old cricket ground at Worksop in 1883. There are no other records.

MELANARGIA Meig.

- M. galatea** L. Very rare and not seen for some years, but it is always possible that so extremely local an insect may persist in some out-of-the-way locality. According to *Brameld* it used to be common at Kirton near Tuxford, at Warsop, and near Mansfield; and Gascoyne found it 'in one field at Egmanton near Tuxford in profusion' (*Newman's Br. Butt.*). Mr. Leivers possesses two specimens captured near Bingham about 1890.

SATYRUS Fab.

- S. semele** L. Sherwood Forest, occasionally (*Sterland*). Formerly common near Mansfield (*Brameld*). Used to be very abundant some seasons at Thieves Wood, on sandy ground: last taken 6. viii. 1884 (*Daws*).

PARARGE Hübn.

- P. egeria** L. Rare. Recorded for Sherwood Forest by *Sterland* and *Brameld*, and more recently taken in the Birklands by *Hardy*. Two specimens were taken in Drypond Wood near Carlton-in-Lindrick about 1881 (*Lady Robinson*). Mansfield, 12. v. 1888 and 2. x. 1889 (*Daws*). A worn example netted in Roehoe Wood, Widmerpool, 23. vii. 1893 (*Leivers*).

- P. megaera** L. Another decreasing species. Sherwood Forest (*Sterland*, *Brameld*, *Hardy*). Occasionally at Southwell, 20 or 30 years ago; also at Ollerton (*W. Becher*, 1900). Plentiful at Cork Hill Farm near Southwell in the 'seventies': not seen since (*Henderson*). Fairly common some seasons in the Mansfield district: taken, *e.g.*, 3. vi. and 10. viii. 1896 (*Daws*). One specimen taken at Clipston near Plumtree, 7. v. 1893 (*Leivers*). One near Cotgrave (*Wallis*). Shireoaks, 13. vi. 1899 (*Houghton*). Seen by Mr. Leivers and myself flying commonly in the lanes about Wigsley and Thorney on August 7 and 8, 1899. Langford Moor near Newark, Aug. 1900. One at Widmerpool, Aug. 1913 (*Saunt*). One at Kingston-upon-Soar, 13. viii. 1914 (*Thornley*).

EPINEPHELE Hübn.

- E. jurtina** L. (*E. ianira* L.). Common and universally distributed in meadows and by roadsides, especially in quiet grassy lanes. It is particularly abundant on the heavy Lias clay soils of the southern part of the county, but appears to be losing ground in the Forest region of the north.
- E. tithonus** L. Locally common, especially in the south of the county. Occurs in profusion in lanes about Cotgrave, Cropwell, Owthorpe, Widmerpool, etc., and on the Foss Road. Also abundant in lanes about Thorney and Wigsley. Common about Kingston-upon-Soar, West Leake and Gotham Hills. Fairly common about Worksop and in the Forest (*Lady Robinson*). Rufford, common (*Becher*). Not common about Mansfield (*Daws*). South Leverton near Retford, common in 1886-87, after which it decreased in numbers, and by 1897 had apparently disappeared entirely (*Thornley*). East Bridgford; Langford Moor (*Saunt*).

APHANTOPUS Wallgr.

A. hyperanthus L. Locally common in damp lanes and woods but like so many of our butterflies has disappeared from districts where it was formerly common. 'About 1882 this species simply swarmed—together with *E. ianira*—in the grass ridings of Clumber and Welbeck Parks: since that time it has entirely disappeared from the neighbourhood' (*Lady Robinson*). 'Sometimes fairly plentiful in swampy situations in the Mansfield district' (*Daws*). In South Notts. it is common at Bunny Wood, in Roehoe Wood and on the Foss Road about Widmerpool and Cotgrave, in the Owthorpe Woods, Clipston near Plumtree, East Leake and Gotham; also at Roe Wood, Winkburn; and at Langford Moor.

The var. *arete* was taken at Owthorpe, 15. vii. 1894 (*Leivers*), and at Cotgrave in 1907 (*Saunt*).

COENONYMPHA Hübn.

C. pamphilus L. Very common and universally distributed; especially abundant in the Forest region.

LYCAENIDAE.

THECLA Fab.

T. quercus L. Local and nowhere very common. Since 1857, when it was seen 'flying about the large oaks by dozens' (*Wm. Rodgers*), it has been taken in Sherwood Forest by numerous collectors. It used to be very common at Thieves Wood near Mansfield, but is now much rarer (*Daws*, 1901). Langford Moor, frequent. Mr. Leivers and I saw this species flying in some numbers round the tops of the oaks in Wigsley Wood, 8. viii. 1899.

T. w-album Knoch. Widely distributed in the county and locally common. Barrett's statement—'very rare in Nottinghamshire' (*Brit. Lepid.*, vol. i. p. 47)—is certainly far from the truth. Sterland records a single specimen taken by himself in the Forest near Thoresby; Brameld took one at Wellow Park in 1859, and Daws one at Teversall in 1870. More recently it has been captured in New Park Wood, Rufford, and several times in Wellow Park (*Becher*); in the latter place also by Leivers. Lady Robinson has taken specimens near Checker House station; in Clumber Park; and in Park House gardens at Worksop—all these between 1893 and 1899. I took one at rest on ragwort flowers in a

field near Worksop, 27. vii. 1900. Mr. Leivers has seen several specimens at Langford Moor near Newark; and I have recently found the larvae commonly on wych elms in a spinney near Lowdham. The headquarters of the species in Notts. are, however, the woods and spinneys, mostly on the Lias and Boulder-clay, in the extreme south of the county. In many of these it is positively abundant, and may be taken freely in all stages.

CALLOPHRYS Billbg.

- C. rubi** L. Rare and local. 'In the immediate neighbourhood of Nottingham' in 1859 (*W. H. Smith*, in *Ent. Wkly. Intell.*, vii. 4). Once taken in Sherwood Forest (*Sterland*). 'Along the brook near Edwinstowe, common every year' (*Hardy*). 'In the years 1858-9-60 I took *T. rubi* plentifully in the woods near Mansfield' (*Brameld*). Occurs at Thieves Wood, but very sparingly (*Daws*). Langford Moor near Newark, some seasons quite common.

POLYOMMATUS Latr. (*Chrysophanus* Hübn.)

- P. phlaeas** L. Common and universally distributed, but more abundant in the dry Triassic sandstone area of the central and northern parts of the county than on the moist clay lands of the south. Occurs from the beginning of May until well into October.

Some good varieties, including the silvery form *schmidtii*, have been taken by Mr. Daws in the Mansfield district. Mr. Howard Birchall took in Sherwood Forest, 18. viii. 1872, 'a splendid albino variety . . . the usual copper colour is replaced on all the wings by a beautiful creamy white.' At Wigsley Wood, in August 1899, Mr. Leivers, in my presence, captured a specimen of a brassy yellow colour which appeared almost white in the sun. Some individuals taken in the county have blue-spotted hind-wings; others have the wings smoky.

LYCAENA Fab.

- L. argus** L. (*L. aegon* Schiff.) Common in Sherwood Forest (*Brameld*). Used to be constant in one restricted locality in Clumber Park (*Lady Robinson*). Several specimens taken by the side of the Rainworth Water near Fountain Dale, 3. viii. 1885; also two taken at Sookholme Moor (*Daws*). This species is included in a list of butterflies taken 'in the immediate neighbourhood of Nottingham' in 1859, by *W. H. Smith* (*Ent. Wkly. Intell.*, vii. 4).

L. icarus Rott. Very common and universally distributed, occurring from early in May to, sometimes, the end of October. The spring brood is usually the larger in point of size, the late summer brood being generally small and the females more brilliantly coloured, some of the latter being almost entirely covered with blue scales (*Leivers*). The species is very variable, and many interesting aberrations have been taken in the county. A gynandrous specimen was taken near Sturton-le-Steeple in North Notts. in August 1881 (*T. Gibbs*, in *Entom.*, 1882).

[*L. minimus* Fuess. (*L. alsus* Fab.). Infrequent in Nottinghamshire (*Wm. Howitt*, *Book of the Seasons*). No entomologist has noticed it in the county.]

CYANIRIS Dalm.

[*C. argiolus* L. In Sterland's list of the Lepidoptera of Sherwood Forest the Holly Blue is said to be 'not uncommon.' It is not mentioned in Brameld's far more reliable list, nor has any later entomologist recorded it. Nevertheless the locality is by no means an unsuitable one, as old holly trees are abundant in parts of Sherwood.]

HESPERIIDAE.

HESPERIA Fab.

H. malvae L. Local, and rare except in localities south of Nottingham. Newstead, 4. vi. 1883 (*Wright*). Southwell and Wellow, occasional (*Becher*). Langford Moor; often common on the Foss Road and lanes about Cotgrave, Owthorpe and Widmerpool, and at Bunny Wood; Plumtree; Gotham and West Leake Hills (*Carr*). Oxtun and Epperstone (*Saunt*).

NISONIADES Hübn.

N. tages L. Local and rare. Near Mansfield in 1859 and 1860 (*Brameld*). Mansfield district, fairly common in spring, as, *e.g.*, 15. v. 1893: occasional specimens taken in autumn also (*Daws*).

ADOPAEA Billbg.

A. flava Bränn. (*A. thaumas* Hufn.). Widely distributed, and often occurring abundantly in the south of the county, but more sparingly in the north. Worksop district, not common

(*Lady Robinson*). Sparingly at Ollerton, the Birklands, and Clumber Park (*Leivers*). Wellow Park, common (*Becher*). Common some seasons in the Mansfield district (*Daws*). Langford Moor; East and West Leake; Gotham; Bunny; Widmerpool; Wysall; Cotgrave;—common and often abundant in all these places.

- A. lineola** Ochs. Taken by Mr. J. N. Young in 1880 at Clumber, Notts. (*Barrett, Brit. Lepid.*, i. 282). It seems strange that none of our local collectors have taken this species.

AUGIADES Hübn.

- A. sylvanus** Esp. Widely distributed and locally abundant in woods and lanes. Not common in the Worksop district (*Lady Robinson*). Sparingly in Sherwood Forest (*Leivers*). Common at Wellow (*Becher*). Abundant in the green drives in Gringley and Treswell Woods, and common in lanes about South Leverton, Treswell, Clabrough, etc., (*Thornley*). Mansfield district, common: appears to be partially double-brooded (*Daws*). Newstead, common (*Wright*). Common about Gotham, West Leake, Bunny, Widmerpool, Wysall, Owthorpe, Langford Moor, etc. Has been taken from June 1 to middle of August.

[*Cyclopides palaemon* Pall. In Newman's *British Butterflies* a list of supposed Nottinghamshire localities is given for this rare species. All these localities are, however, in Lincolnshire, and there is no trustworthy record of its occurrence in this county.]

HETEROCERA (MOTHS).

SPHINGIDAE.

SMERINTHUS Latr.

- S. ocellatus** L. Not uncommon, but mostly taken in the larval state. Retford district, in several places (*Thornley*). South Scarle, larvae common in 1886 on the wild crab (*Hewett*). Wellow; Southwell (*Becher*). Langford Moor (*Leivers*). In fair numbers in most seasons in the Mansfield district: larvae found on apple and willow; a ♂ taken at Mansfield, 21. vi. 1890, has the ocellus on the right hind wing replaced by a dark triangular patch: the left wing is normal (*Daws*). Kingston-upon-Soar and Sutton Bonington: larvae on apple and willow (*Thornley*). Nottingham;

Lenton; Wilford; West Bridgford; Wollaton; Chilwell; larvae fairly plentiful on apple, crab and aspen.

S. populi L. Widely distributed and of frequent occurrence. Worksop, several times; a larva once found feeding on ash (*Lady Robinson*). Retford district in several places (*Thornley*). Ollerton and Wellow (*Becher*). Edwinstowe (*Leivers*). Fairly common in all stages in the Mansfield district: has emerged with me as early as May 4 (1896), and as late as September 16 (1898), the latter from ova deposited the previous June (*Daws*). Stapleford, common (*Dawson*). Beeston; Attenborough; Bramcote; not uncommon (*Pearson*). Hucknall Torkard, ♂ ♀, 17. vi. 1911. Frequent in and around Nottingham. A ♂ emerged, 28. viii. 1911, from a pupa dug up under a poplar at Mapperley a week or so previously (*Thornley*). Larvae at Owthorpe in 1911 and 1912 (*Saunt*).

DILINA Dalm.

D. tiliae L. Rare. Mansfield, bred 15. vi. 1860 (*Brameld*). One specimen taken at Mansfield, date not recorded (*Daws*). Marnham, near Tuxford, bred several times by Rev. E. Cunningham from larvae found on lime trees in his garden.

ACHERONTIA Ochs.

A. atropos L. The Death's Head moth is very irregular in its appearance, some years being quite common, in others almost absent. Mansfield, 1857 (*W. H. Smith*); common in 1858 (*Brameld*); taken on several occasions (*Daws*). Newark, 60 or 70 larvae and pupae taken in 1858 (*Gascoyne* in *Ent. Wkly. Intell.*, v. 4). Imagines and pupae taken at Newark in Sept. 1859 (*Hadfield*). A fine imago taken at rest on a wall at Welbeck Abbey gardens, 29. v. 1877 (*R. A. Rolfe*). Southwell; Kelham; Rufford; Wellow (*Becher*). Two imagines at Southwell in 1876, and a larva in 1900 (*Henderson*). Shireoaks, 18. vi. 1900 (*Houghton*). Many larvae brought to me from various villages in the Retford district in 1896, 1899 and 1900; an imago from Welham, 23. vi. 1900 (*Thornley*). Larvae common at Tuxford in 1889 (*W. A. Gain*). Larvae at Beeston and Chilwell, 1893 and 1899 (*Pearson*). In the autumn of 1899 Mr. Leivers obtained over a dozen larvae and pupae, and in the following autumn twice that number, all from Langar: from these he bred a magnificent series of specimens. Larvae were obtained at Blidworth in 1899; an imago at Ruddington in June 1900; in Sept. 1900 six larvae were found at Fiskerton,

two at Arnold, and a pupa at West Bridgford. A man digging potatoes in a field at Cotgrave in the same autumn boasted that he had killed at least a score of the "grubs." An imago was captured on Carlton Road, Nottingham, 25. viii. 1908 (*Saunt*), and another at Sherwood, Nottingham, in 1910 (*Wallis*).

SPHINX L.

S. convolvuli L. A scarce and uncertain immigrant. In Sept. 1846 one was taken at Beeston and several near Newark (*J. Wolley*). Nottingham, 1859 (*W. H. Smith*). Mansfield, 1859, one captured, others seen (*Brameld*). One at rest on churchyard wall at Southwell, 1875 (*Henderson*). One at rest on gate post at Southwell, Sept. 1881 (*W. Baker, Entom.*, 1881). Two taken at Edwinstowe by Mr. Fells, Sept. 25 and 26, 1875 (*J. Clark, Entom.*, 1875, p. 277). One at Nottingham, 5. ix. 1883 (*W. T. Wright, Entom.*, 1883). Mansfield, three or four specimens at various times, one 10. ix. 1884 (*Daws*). One at Tuxford, 23. viii. 1887 (*Gain*). Southwell, 1901; also taken at Wellow (*Becher*). Chilwell, one taken at rest, 4. ix. 1901; also a larva on *Convolvulus* in clover field, 26. viii. 1901, which subsequently produced an imago (*Pearson*). Two fine specimens in Park House gardens, Worksop, 8. ix. 1897, flying about 7.30 p.m. over a bed of *Nicotiana affinis* (*Lady Robinson*). Wheatley near Retford, 23. viii. 1905 (*Chamberlin*).

S. ligustri L. Frequent. 118 larvae were taken by one individual in the neighbourhood of Nottingham in 1859 (*W. H. Smith* in *Ent. Wkly. Intell.*, vii. 4). Larvae at Sherwood Forest, Aug. 1860 (*W. Talbot*). Sherwood Forest, common (*Brameld*). Wellow (*Becher*). One specimen at Southwell, at rest on a fence, 1875; several larvae in same locality (*Henderson*). Fairly plentiful about Mansfield in both larval and perfect states (*Daws*). North Leverton, 23. vii. 1901 (*Thornley*).

DEILEPHILA Ochs.

[*D. euphorbiae* L. Sherwood Forest, one specimen (*Sterland*). Doubtless an error of identification or locality.]

D. galii Schiff. Nottingham, 1859 (*W. H. Smith* in *Ent. Wkly. Intell.*, vii. 4). Sherwood Forest, once (*Sterland*). Occurred in Nottinghamshire in 1870 (*E.M.M.*, Jan. 1891, p. 6). 'I took two specimens at flowers of honeysuckle close to my house door at West Hill, Mansfield, June 24 and 26,

1866; another was taken at West Hill by Mr. T. Ratcliffe about the same date' (*Daws*).

CHAEROCAMPA Dup.

C. celerio L. This rare visitor has been captured in the county on quite a number of occasions.

Newark, a specimen caught on the wing in centre of town, 18. ix. 1859 (*W. P. Hadfield* in *Ent. Wkly. Intell.*, vii. 4); doubtless it is the same specimen that is recorded in the *Ent. Ann.* for 1860, p. 139. One found in a factory in Nottingham, 22. ix. 1860 (*Entom. Annual* for 1861, p. 96). One at rest on a clothes-line in a garden at Edwinstowe, 29. ix. 1876 (*A. Doncaster, Entom.*, 1876). One taken on a tree in an orchard at Retford, November 1884; another from a window pane in a Retford street, 2. x. 1885 (*S. Pegler, Entom.*, 1885). One taken at rest on a window shutter in St. Ann's Well Road, Nottingham, 12. x. 1892 (*A. Pike, Entom.*, 1893).

Besides the above published records Mr. D. H. Pearson writes me 'A specimen of *C. celerio* was taken at Chilwell many years ago by my brother. It was captured in a vinery and had probably fed on the vine.'

C. porcellus L. Scarce. One captured at Mansfield in 1859; one bred 11. vii. 1860 (*Brameld*). Sherwood Forest, one specimen flying about a sugared tree, June 1871 (*G. T. Porritt*). One at Wellow, 1901 (*Becher*). Mansfield, occurs most seasons: *e.g.*, taken on the 20th, 21st and 22nd June, 1890 (*Daws*). One specimen taken in a street at Worksop, 1901 (*Lady Robinson*). One at Bulwell recently (*Simmons*). One at Langford Moor, 5. vi. 1911 (*Saunt*).

C. elpenor L. Scarce, but rather more frequent than the last species. Shireoaks, 18. vi. 1899 (*Houghton*). South Leverton and Marnham (*Thornley*). Rufford and Wellow (*Becher*). Fairly common in the Mansfield district, but most often found in the larval stage (*Daws*). Chilwell, several taken at honeysuckle bloom (*Pearson*).

MACROGLOSSA Scop.

M. stellatarum L. Immigrant: frequently common throughout the county. Newark, quite common in every flower-garden in 1858 (*Gascoyne* in *Ent. Wkly. Intell.*, vol. v.). Occasionally at Worksop (*Lady Robinson*). Southwell; Ollerton; Wellow (*Becher*). Haughton near Tuxford, bred from larva found on bedstraw (*Galium verum*) (*Miss M. C.*

Atkinson). Occurred most years in the vicarage garden at South Leverton, and in 1899 it was common; also at Marnham; and at Grove, 6. v. 1901 (*Thornley*). Mansfield, occasionally abundant, particularly so in 1900 (*Daws*). Langar, July to September, 1900 (*Leivers*). Abundant in 1899 in gardens in Nottingham and the surrounding district, and fairly plentiful in 1900; Langford Moor, 29. vi. 1899.

HEMARIS Dalm.

H. fuciformis L. (The Broad-bordered Bee-Hawk). First found in Nottinghamshire by A. R. Leivers and myself in May 1895, when several specimens were taken at rhododendron flowers at Langford Moor. Later in the year numerous larvae were found feeding on honeysuckle. In August 1899 we found a few larvae at Wigsley Wood (*J.W.C.*).

SATURNIIDAE.

SATURNIA Schrk.

S. pavonia L. Formerly locally common on heaths, now rare. Sherwood Forest (*Sterland, Hardy*). Shireoaks, one larva, 1899 (*Houghton*). Common on Mansfield Forest and around Blidworth (*Henderson*). Taken very plentifully a few years ago in Newstead Park, but no specimens can now be obtained (*Midland Nat.*, 1884, p. 92). Used to be common both at Ratcher Hill and near the Hut on the Newstead Abbey estate (*Daws*).

[*Endromis versicolor* L. 'Sherwood Forest, frequent' (*Sterland*). Error?]

LASIOCAMPIDAE.

POECILOCAMPA Steph.

P. populi L. Widely distributed and fairly common: mostly taken at light. Sherwood Forest, one larva beaten from oak (*Porritt*). One larva on palings in Clumber Park (*Lady Robinson*). Shireoaks, several imagines, 1900 (*Houghton*). South Leverton, a few on windows (*Thornley*). Southwell (*Becher*). Very irregular in its appearance at Mansfield: mostly taken from gas lamps; also bred from larva found at Thieves Wood, 17. xi. 1895 (*Daws*). Chilwell, often common at light: from Nov. 7 to 12, 1892, I took 40 specimens off the gas-lamps here (*Pearson*). Wollaton, on gas-lamps (*Leivers*). Widmerpool (*Simmons*). Lenton, 1912 (*Saunt*).

TRICHIURA Steph.

T. crataegi L. Frequent, and pretty general. Fairly common at Clipstone near Edwinstowe: taken, *e.g.*, Sept. 10, 12, 17 and Oct. 7, 1892 (*Daws*). Wellow (*Becher*). South Leverton, rather frequent (*Thornley*). Marnham (*Cunningham*). Southwell, a few at light; several larvae from hawthorn (*Henderson*). Chilwell, two specimens on gas-lamps, 24. ix. 1891 (*Pearson*). West Bridgford, one at light (*Simmons*). Larvae at Ruddington, Gotham and Widmerpool (*Leivers*), and at Flawforth near Plumtree, 1908 (*Saunt*).

ERIOGASTER Germ.

E. lanestris L. Widely distributed, and often abundant in the larval stage. Sherwood Forest, common (*Brameld*). Wellow (*Becher*). South Leverton, nests of larvae very abundant some years: two examples emerged from cocoons on 20. iii. 1897 (*Thornley*). Newark, 18—20. iii. 1860 (*Gascoyne*). Nests of larvae often abundant on *Crataegus* and *Prunus spinosa* about Southwell, Ruddington, Cotgrave, Bunny, Widmerpool, Normanton-on-the-Wolds, and other places south of Nottingham. Mr. D. H. Pearson bred specimens from Cotgrave larvae, March 13, 16, 1892; Feb. 16, Mar. 6, 1893; Feb. 28, 1894; some were three years in pupa before emergence.

MALACOSOMA Hübner.

A. neustria L. Rather local. Sherwood Forest, common (*Sterland*, *Brameld*). South Leverton, some years the larvae are common: a large nest of larvae noted in oak tree in vicarage garden, 24. v. 1901: imagines began to come to lighted windows, 18. viii. 1901 (*Thornley*). Larvae in abundance at Southwell and Ruddington (*Henderson*). Larvae at Beeston and Attenborough, Cotgrave, Langar, etc.

MACROTHYLACIA Ramb.

M. rubi L. Rare, and confined to Sherwood Forest, whence recorded by *Sterland* and *Brameld*. 'I took about ten larvae on the common near Edwinstowe, August, 1896' (*J. R. Hardy*).

LASIOCAMPA Schrk.

L. quercus [^]L. Frequent, sometimes common locally. Sherwood Forest (*Sterland*, *Brameld*, *Hardy*). Clumber Park;

Thieves Dale Lane, Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, uncommon (*Thornley*). Mansfield district: some seasons I could have taken scores by 'assembling' (*Daws*). Common about Southwell: I have also taken specimens of the var. *callunae* (*Henderson*). Stapleford, 1907 (*Dawson*). Chilwell, larvae fairly common on hawthorn (*Pearson*). One imago and a few larvae taken at West Bridgford (*Wallis*). Edwalton; Ruddington; Plumtree; Stanton-on-the-Wolds (*Saunt*).

- L. trifolii** Esp. Sherwood Forest, occasionally (*Sterland*). Larvae at Flawforth near Plumtree, 1908 (*Saunt*).

COSMOTRICHE Hübn.

- C. potatoria** L. Of general occurrence. Sherwood Forest, common (*Sterland*, *Brameld*, *Hardy*). Ollerton; Wellow (*Becher*). Occasional about Worksop, chiefly in larval state (*Lady Robinson*). South Leverton, common in both larval and perfect stages (*Thornley*). Mansfield, larvae very common, imago not often seen (*Daws*). Larvae not uncommon at Chilwell (*Pearson*). Sparingly at Bulwell Forest (*Leivers*). Very common in larval state about Southwell, West Bridgford, Edwalton, Plumtree, Keyworth, Ruddington, Bradmore, Bunny, Cotgrave, Widmerpool, etc.

GASTROPACHA Ochs.

- G. quercifolia** L. Very rare and local. Sherwood Forest, occasional (*Sterland*). Mansfield, one larva: the imago emerged 27. vi. 1880 (*Daws*).

ARCTIIDAE.

ARCTIINAE.

SPILOSOMA Steph.

- S. menthastri** Esp. Fairly common and of general occurrence. Worksop district, not so frequent as the next species (*Lady Robinson*). Sherwood Forest (*Carr*). Wellow (*Becher*). Mansfield district, not quite so common as *S. lubricipeda* (*Daws*). South Leverton, very common: came to light at vicarage windows in great abundance, 23. vi. 1899, and again, very freely, 5. vi. 1901 (*Thornley*). Fairly common in the Nottingham district.

- S. lubricipeda** L. Common throughout the county, especially in gardens.

S. urticae Esp. Very rare. Sherwood Forest, occasional (*Sterland*).

S. mendica Clerck. Frequent in the Sherwood Forest area, rare elsewhere. Recorded from the Forest by *Sterland* and *Brameld*. Occasionally at Worksop (*Lady Robinson*). Rufford and Wellow (*Becher*). Sparingly at Clipstone near Edwinstowe (*Daws*). South Leverton, occasionally (*Thornley*). Bunny (*Simmons*). Oxtou Bogs, 1908 (*Saunt*).

PHRAGMATOBIA Steph.

P. fuliginosa L. Widely distributed and frequent. Sherwood Forest, occasionally (*Sterland*, *Brameld*, *Hardy*). Clumber Park, one specimen, 2. vii. 1881 (*Lady Robinson*). Ollerton and Wellow (*Becher*). Mansfield district, not common, but taken in both spring and autumn (*Daws*). A few larvae taken on heath on Mansfield Forest (*Henderson*). Bulwell (*Simmons*). Several specimens taken from gas lamps at Bagthorpe, Nottingham (*Leivers* and *Carr*). Larvae at Owthorpe, 1912 (*Saunt*).

PARASEMIA Hübn.

P. plantaginis L. Rare and local. Near Mansfield, 1857 (*W. H. Smith*), and in 1859 (*Brameld*). Thieves Wood near Mansfield, 14. vi. 1890 (*Daws*). Wigsley Wood, 26. v. 1896.

DIACRISIA Hübn.

D. sanio L. (*D. russula* L.). Sherwood Forest, formerly fairly common, now rare. A few specimens taken in June 1868 (*R.* and *W. Tyrer*). Ollerton (*Becher*). Formerly common in Clumber Park, e.g., 2. vii. 1881, 3. vii. 1884; taken in same locality 29. vi.—4. vii. 1894 (*Lady Robinson*). Among the heather on Mansfield Forest, 18. vi. 1886, 2. vii. 1887, none seen since (*Daws*).

ARCTIA Schrk.

A. caja L. Occurs commonly throughout the county but is much more abundant in the larval than in the perfect state.

[*Arctia villica* L. ('frequent'); *Callimorpha dominula* L. ('not unfrequent'), and *Coscinia cribrum* ('one specimen') are all recorded for Sherwood Forest by *Sterland* only, and cannot be accepted without confirmation.]

HIPOCRITA Hübn.

H. jacobaeae L. Generally distributed and common where the ragwort (*Senecio jacobaea*) grows.

Workshop district; Clumber Park; Ollerton; Edwinstowe; Budby; Creswell Crags; Cuckney Hay Wood; etc., larvae abundant, imagines frequent (*Carr*). Fairly common in old quarries at Mansfield (*Daws*). Newstead and Annesley, larvae common (*Henderson*). South Leverton; Marnham; only a few seen (*Thornley*). Bramcote and Wollaton, larvae fairly plentiful (*Pearson*). Langford Moor, common; Thorney; Oxtun; Cotgrave; Owthorpe; etc. Gotham and West Leake Hills, larvae excessively abundant in 1913, and imagines very common in May 1914.

LITHOSIINAE.

NUDARIA Haw.

N. senex Hübn. Very rare. 'On the railings near Normanton Inn [Clumber Park] several times' (*J. R. Hardy*).

N. mundana L. Rare. Sherwood Forest (*Sterland, Brameld, Hardy*). Shireoaks, 23. vi. 1899 (*Houghton*).

MILTOCHRISTA Hübn.

M. miniata Forst. Rare. Sherwood Forest (*Sterland, Brameld*). One specimen in Pheasant Wood, 21. vii. 1880 (*Lady Robinson*).

CYBOSIA Hübn.

C. mesomella L. Rare. Sherwood Forest, occasionally (*Brameld*). Sherwood Forest, June 1868, a good many specimens flying in the evening in the open places (*R. and W. Tyrer*).

LITHOSIA Fab.

[*L. deplana* Esp. Sherwood Forest, once (*Sterland*). A doubtful record.]

L. lurideola Zinck. (*L. complanula* Bdv.). Sherwood Forest, common (*Sterland, Brameld*). Shireoaks, 8—28. vii. 1900 (*Houghton*). South Leverton and the surrounding district, common in July 1900 (*Thornley*). Southwell (*Becher*). Ruddington, 'common' (*G. Pike*). Two specimens at West Bridgford (*Wallis*).

- L. complana** L. Rare. Sherwood Forest (*Sterland*); in same locality, Aug. 1860 (*W. Talbot*). 'I took nine specimens by beating larches about two miles from Worksop, at end of June 1887. It was again taken in 1894' (*J. R. Hardy*).

GNOPHRIA Steph.

- G. rubricollis** L. Very rare. Sherwood Forest, occasional (*Sterland*). 'I swept a pair between Worksop and Edwinstowe, and have found the larvae on lichen-covered railings several times, but never reared any' (*J. R. Hardy*).

OEONISTIS Hübner.

- Oe. quadra** L. Sherwood Forest, several times (*Sterland*).

LYMANTRIIDAE.

ORGYIA Ochs.

- O. gonostigma** Fab. 'Six larvae swept on the common near Edwinstowe, from which two males and a female were bred' (*J. R. Hardy*).
- O. antiqua** L. Generally distributed: a common garden pest: often excessively abundant and destructive in the larval stage.

DASYCHIRA Steph.

- D. pudibunda** L. Widely distributed and frequent. 'Sherwood Forest, common, especially in the hop grounds' (*Sterland*). Larvae beaten in Sherwood Forest, Aug. 1894 (*G. T. Porritt*). Ollerton and Wellow (*Becher*). Edwinstowe, ♂, ♀, 23. v. 1893 (*Pearson*). Clumber Park, 22. v. 1893 and 25. v. 1894 (*Lady Robinson*). South Leverton and Treswell Wood, larvae and imagines frequent (*Thornley*). Thieves Wood near Mansfield, 29. v. 1897 (*Daws*). Several at Roe Wood, Winkburn, 1870—80 (*Henderson*). A few at Bunny, June 1896 (*G. Pike*). Epperstone, 1910-11 (*Saunt*).
- [*D. fascelina* L. Sherwood Forest, several times (*Sterland*). Doubtful.]

PORTHESIA Steph.

- P. chrysorrhoea** L. Rare. Reported from Sherwood Forest by *Sterland* and *Hardy*. Near Mansfield, bred 14. vii. 1860

(*Brameld*). Marnham, some years not uncommon (*Rev. F. Cunningham*). One specimen at Langford Moor, 14. viii. 1896 (*Leivers*).

P. similis Fuessl. Abundant throughout the county.

STILPNOTIA Westw. and Humphr.

S. salicis L. Rare. One on doorstep at Park House, Worksop, 17. viii. 1900 (*Lady Robinson*). A larva at East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). One or two other records exist which require confirmation.

LYMANTRIA Hübn.

L. monacha L. Sherwood Forest, frequent (*Sterland*), common (*Brameld*). Sherwood Forest, 1857 (*Wm. Rodgers*), 1858 (*J. Batty*). Mr. J. N. Young took a battered female in Sherwood Forest, 27. vii. 1882, from which larvae were reared the following year. An attempt was made to continue the succession without introducing fresh blood, but the specimens reared from the third brood of larvae were very degenerate. Langford Moor near Newark, 26. vii. 1898 (*G. Pike*), also in 1912 (*Saunt*).

DREPANIDAE.

DREPANA Schrk.

D. falcataria L. Not uncommon in Sherwood Forest. Taken rather freely in the Manor Woods, Worksop; Clumber Park; the Birklands; the Bilhagh; and elsewhere in the Forest by numerous collectors. Thieves Wood near Mansfield, both broods beaten from birch, 12. v. and 16. viii. 1892, etc. (*Davis*). Harlow Wood, June 1901; Sherwood Lodge, Arnold, 27. vi. 1901 (*Carr*). Langford Moor, in some numbers (*Leivers*, *G. Pike*, *Saunt*). Oxtun (*Saunt*).

D. lacertinaria L. Six larvae taken in Sherwood Forest (together with four of *D. falcataria*) 14. viii. 1858 (*Batty*). There is nothing improbable about this record, but it is strange that no one else has seen it there. Langford Moor, 1910-12-13 (*Saunt*).

CILIX Leach.

C. glaucata Scop. Frequent, and fairly general in its distribution. Worksop, April 27 and Aug. 2 (*Lady Robinson*).

Shireoaks, 17. vii. to 18. viii. 1900 (*Houghton*). Ollerton; Wellow; Southwell (*Becher*). Near Mansfield, common, 21. v. 1860 (*Brameld*). North Leverton, flying commonly at dusk, 28. v. 1901; South Leverton and Marnham, scarce; Kingston-upon-Soar, August 1904 (*Thornley*). Oxtun (*Saunt*). Stapleford, common (*Dawson*). Frequent in many places in the Nottingham district.

NOTODONTIDAE.

CERURA Schrnk.

- C. bifida** Hübn. Scarce and local. Sherwood Forest, larvae taken in 1857 by W. Rodgers, and in 1860 by W. Talbot. Bred from larva feeding on poplar at Ollerton (*Becher*). A pair of imagines taken at rest on a wall at Worksop, 1899: others taken same year (*Hardy*). Mansfield district, not common (*Daws*). Beeston, one taken at rest on poplar (*Pearson*).
- C. furcula** L. Scarce. A ♂ beaten from willow on railway bank between Worksop and Checker House station (*Hardy*). Southwell (*Becher*). One or two larvae at Southwell (*Henderson*). Mansfield, larvae only, but in fair numbers (*Daws*). Larvae at Wilford (*Leivers*), West Bridgford (*Simmons*), and Widmerpool.
- C. vinula** L. Much more plentiful than either of the foregoing, but seen most frequently in the larval condition. Taken in Sherwood Forest by many collectors. Worksop, scarce (*Lady Robinson*). Ollerton (*Becher*). Retford; North and South Leverton; Marnham (*Thornley*). Mansfield (*Brameld*). Fairly common in the Mansfield district: I have found the larvae more often on willow than on poplar (*Daws*). Stapleford, common (*Dawson*). Woodborough; Tollerton; Owthorpe (*Saunt*). Aldercar Wood, Newstead, larvae on aspen; Nottingham district (Lenton, Bulwell, West Bridgford, Chilwell, Plumtree, etc.), larvae not uncommon.
- STAUROPUS** Germ.
- S. fagi** L. Very rare, and confined to Sherwood Forest, whence we have records of:—a larva taken in 1857 (*W. Rodgers*); three larvae near Edwinstowe, 14. viii. 1858 (*J. Batty*); one, nearly full-fed, in 1877 (*J. Dennis*); and a single imago—‘a beautiful male at rest on a young oak, June 1871’ (*G. T. Porritt*).

DRYMONIA Hübn.

- D. trimacula** Esp. (*D. dodonaea* Hb.). Rare, and confined to Sherwood Forest, 'the larvae nestling in the deep wrinkles of the bark of its aged oaks during the day' (*Rev. B. Smith* in *Entom.*, 1888, p. 37). Recorded by Sterland and Brameld. Larvae in 1857 (*Rodgers*); six larvae and two pupae, 14. viii. 1858 (*J. Batty*); larvae in 1860 (*W. Talbot*); five larvae, 20—24. viii. 1872 (*G. C. B. Madden*). Apparently no recent records.
- D. chaonia** Hübn. Very rare. Sherwood Forest, several times (*Sterland*). Budby, Sherwood Forest, an imago at rest on a tree trunk, 14. v. 1894 (*Leivers*).

PHEOSIA Hübn.

- P. tremula** Cl. (*P. dictaea* Esp.). Rare. Sherwood Forest (*Brameld*, *Hardy*). Ollerton (*Becher*). One bred, 17. v. 1892, from pupa found in March behind moss on fallen stump at Chilwell; also an imago taken at rest at Chilwell (*Pearson*).
- P. dictaeoides** Esp. Very rare. One taken at Ollerton in 1896 (*Becher*). One at Shireoaks near Worksop, 1900 (*Houghton*). One at Oxtun, 1909 (*Saunt*).

NOTODONTA Ochs.

- N. ziczac** L. Not infrequent, but only in the larval state. Larvae occasionally at Worksop (*Lady Robinson*). Common on railway banks at Checker House, on willow (*Hardy*). Mansfield: I have only taken it in the larval stage feeding on sallow (*Daws*). A few larvae at Thurgarton (*Henderson*). Langford Moor, 1899.
- N. dromedarius** L. Scarce, and almost confined to Sherwood Forest. Larvae at Sherwood Forest, Aug. 1860 (*W. Talbot*); two in August 1872 (*Madden*). An imago near Nottingham, June 1883 (*W. T. Wright*). Sherwood Forest (*Hardy*). Ollerton (*Becher*). One at rest in Clumber Park, 5. vii. 1893 (*Lady Robinson*). One imago and two larvae at Cinderhill, the former in 1899, the latter in 1900 (*Henderson*).
- N. trepida** Esp. Scarce, and practically confined to Sherwood Forest. Sherwood Forest, 14. v. 1848 (*Sterland*); three pupae in 1857 (*Rodgers*); larvae in Aug. 1860 (*Talbot*); taken at rest on tree trunks in the Forest near Edwinstowe, June 4—7, 1892, by members of the Birmingham Ent. Soc.

(*Entom.*, 1892); larvae at Ollerton (*Becher*). Thieves Wood near Mansfield, 18. vi. 1894, etc.: has of late years become more frequent (*Daws*).

LOPHOPTERYX Steph.

L. camelina L. Uncommon, but widely distributed. Sherwood Forest, records fairly numerous. Shireoaks, 6. vi. 1899 (*Houghton*). Treswell Wood, 9. vi. 1900: larvae also taken there; Marnham (*Thornley*). Mansfield, two imagines and several larvae (*Daws*). Langford Moor, larva, Aug. 1896 (*Leivers*). Nottingham, June 1883, a few taken off palings in early morning (*W. T. Wright*). West Bridgford, occasional (*Simmons, Wallis*). Chilwell, larvae from lime, bred 10. vi. and 5. vii. 1892 (*Pearson*). Epperstone Park, a fine female, 19. v. 1901 (*Carr*). Oxtun, 1908 (*Saunt*).

[*Ptilophora plumigera* Esp. Sherwood Forest, once (*Sterland*). Doubtless recorded in error.]

PTEROSTOMA Germ.

P. palpina L. Rather rare. Sherwood Forest, occasional (*Sterland*). Railway banks near Checker House, 2 ♂♂, 1 ♀, 1874 (*Hardy*). Southwell and Averham (*Becher*). South Leverton, one specimen at light, 23. vi. 1899; Marnham (*Thornley*). One at Wilford (*Wallis*).

PHALERA Hübn.

P. bucephala L. Common throughout the county. The larvae are often very abundant and destructive. I have frequently seen lime trees in Nottingham with many branches almost completely defoliated by them. Besides lime, they attack hazel, elm, oak, birch, sallow and willow.

PYGAERA Ochs.

[*P. curtula* L. Sherwood Forest, frequent (*Sterland*). Requires confirmation before it can be accepted.]

P. pigra Hufn. Langford Moor near Newark, larvae on dwarf sallow (*Salix repens*); taken each year from 1909 to 1913, very plentifully in 1912 (*Saunt, Dawson* and others).

CYMATOPHORIDAE.

HABROSYNE Hübn.

H. derasa L. Widely distributed and frequent. Worksop; Clumber Park; Edwinstowe; Ollerton; Wellow; and else-

where in Sherwood Forest. Cauldwell Road near Sutton-in-Ashfield, very sparingly at sugar, 12. vii. 1893 (*Daws*). Southwell (*Becher*). Chilwell, rare at sugar (*Pearson*). Broxtowe Wood near Nottingham; Bunny; Widmerpool; Epperstone; Langford Moor. Sneinton Dale, Nottingham (*Saunt*).

THYATIRA Hübn.

- T. batis** L. Rather more frequent than *H. derasa*. Sherwood Forest: 'I have taken it on the ling in the daytime, and also at sugar at night' (*Sterland*); frequent (*Brameld*). Worksop, taken freely at sugar, June 1900 (*Lady Robinson*). Shireoaks, 14—18. vi. 1900 (*Houghton*). Fairly plentiful at Berry Hill and Cauldwell at sugar (*Daws*). Broxtowe; Bunny; Widmerpool; frequent at sugar. Epperstone; Langford Moor (*Saunt*).

CYMATOPHORA Treits.

- C. octogesima** Hübn. Exceedingly rare. Sherwood Forest, twice taken (*Sterland*).
- C. or** Fab. Rare. Sherwood Forest, frequent (*Sterland*). Edwinstowe (*Becher*). Thieves Wood, two specimens at rest on tree-trunks, 14. vi. 1890 (*Daws*).
- C. duplaris** L. Rare. 'I took a very dark variety of this insect at Thieves Wood near Mansfield, 10. vii. 1884 (*Daws*). Larvae beaten from birch, Sherwood Forest near Edwinstowe, 18—25. viii. 1890 (*A. F. Hall* and *J. Batty, Entom.*, 1890). Langford Moor, 1912-13 (*Saunt*).

POLYPLOCA Hübn. (*Asphalia* Led.).

- P. diluta** Fab. Frequent in Sherwood Forest and recorded thence by many collectors. Langford Moor, 1910-11-12-13 (*Saunt*).
- P. flavicornis** L. Worksop, some seasons common: *e.g.*, many specimens taken at rest on palings and tree-trunks from the 2nd to the 21st March, 1894; larvae also taken, rolled up in birch leaves, in Worksop Manor Woods and Clumber Park (*Lady Robinson*). Sherwood Forest (*Sterland, Hardy*); larvae not uncommon on birch, June 1871 (*Porritt*). One specimen in Grammar School, Retford, 28. iii. 1903 (*Thornley*). Thieves Wood near Mansfield, 20. iv. 1891. and 27. iii. 1894 (*Daws*). One at West Bridgford (*Wallis*). Oulton, 1909 (*Saunt*).

- P. ridens** Fab. Sherwood Forest, occasionally (*Sterland*). One specimen taken in Clumber Park, 16. iv. 1894, by Lady Robinson.

NOCTUIDAE.

ACRONYCTINAE.

DEMAS Steph.

- D. coryli** L. Rare and local. Ollerton (*Becher*). Mansfield: I have found the larvae here on willow as well as hazel (*Daws*).

ACRONYCTA Ochs.

- A. leporina** L. Frequent in Sherwood Forest: records numerous, especially for larvae. Clumber Park, an imago at rest, 1895 (*Lady Robinson*). Ollerton (*Becher*). Thieves Wood, Mansfield, 18. vi. 1894: the var. *bradyporina* 2. vii. 1895 (*Daws*). Langford Moor, two larvae, Aug. 1898 (*G. Pike*).
- A. aceris** L. 'Double-brooded at South Scarle, two specimens being taken at sugar on Sept. 11th, both being quite fresh but very unlike the early brood, being a dull greenish-yellow instead of the pure grey of the earlier lot.' (*G. M. A. Hewett* in *Entom.*, 1886). The only record for the county.
- A. megacephala** Fab. Scarce. Sherwood Forest (*Sterland, Hardy*). A few larvae taken in the Nottingham district (*Henderson*). Bulwell Forest. Chilwell, not common (*Pearson*). West Bridgford, one larva (*Wallis*). Epperstone, 1910; Staythorpe, 1912 (*Saunt*).
- A.alni** L. Rare, but records fairly numerous. Ruddington, two larvae on plum, 18. viii. 1875; one bred three years previously from larva found in same district (*S. Birkin*). Grove Wood near Retford, a larva on hazel, 13. viii. 1876 (*E. H. Stenton*). One larva in Sherwood Forest, 1877 (*G. Dennis*). Cotgrave, a larva on hawthorn, 3. viii. 1878, bred 3. vi. 1879 (*W. Watchorn*). One larva on oak in Wollaton Park, 21. ix. 1879 (*J. Brooks*). One at Southwell in 1881 (*W. Baker*). All the foregoing are recorded in the *Entomologist* for the years specified. Worksop, a larva in Park House gardens, ichneumonid (*Lady Robinson*). Thieves Wood near Mansfield, a fine ♀, 16. vi. 1895: also a pupa under bark of dead tree, which produced a ♂, 18. vi. 1895 (*Daws*). Langford Moor, one larva on birch, 5. viii. 1899; one on Bulwell Forest, 20. viii. 1900 (*Pike*). One larva on

rose at Thoresby, 1900 (*Becher*). On Aug. 2, 1901, I was shown a full-fed larva found that day on oak in the grounds of the Agricultural College at Kingston-upon-Soar. Epperstone, 1910 (*Saunt*).

A. tridens Schiff. Sherwood Forest (*Sterland, Hardy*). Mansfield, much scarcer than *A. psi* (*Daws*). Marnham, bred (*Rev. E. Cunningham*). Stapleford, 1912 (*Dawson*). Chilwell, not common, larvae on hawthorn (*Pearson*). Perhaps not distinguished from the next species.

A. psi L. Common throughout the county.

A. menyanthidis Vieweg. Rare. Sherwood Forest, two larvae, 14. viii. 1858 (*J. Batty* in *Ent. Wkly. Intell.*, vol. iv., p. 182). Seven specimens from amongst heather near Edwinstowe, July 1897; larvae several times obtained by sweeping at same place (*J. R. Hardy*).

A. rumicis L. Frequent and fairly general. Barrow Hills, Everton, 15. vi. 1904; South Leverton (*Thornley*). Worksop; Clumber; Edwinstowe; etc. Mansfield district, fairly common (*Daws*). Stapleford, common (*Dawson*). Chilwell, not common, bred from larvae feeding on *Pelargonium* (*Pearson*). West Bridgford (*Simmons*). Nottingham; Wollaton; Epperstone; Bunny; Widmerpool; etc.

CRANIOPHORA Snell.

C. ligustri Fab. Very rare. Sherwood Forest (*Sterland*). One specimen at Checker House near Worksop, July 1875 (*Hardy*). Calverton, 1908 (*Saunt*).

BRYOPHILA Tr.

B. perla Fab. Worksop district (*Lady Robinson*). Ollerton and elsewhere in Sherwood Forest. South Leverton, not uncommon on brick walls (*Thornley*). Mansfield, fairly common on walls (*Brameld, Daws*). Southwell (*Becher*). Stapleford, 1912-13 (*Dawson*). Wollaton Park wall, common. Chilwell, common on walls (*Pearson*). West Bridgford (*Wallis*). Kingston-upon-Soar (*Thornley*). Woodborough (*Saunt*).

TRIFINAE.

AGROTIS Ochs.

A. segetum Schiff. Common everywhere.

A. vestigialis Rott. Very rare. Sherwood Forest, rare (*Sterland, Brameld*). 'One specimen taken 11. vii. 1894 at

sugar in my garden at Mansfield, a strange locality for this coast species' (*Daws*).

A. corticea Hübn. Local. Sherwood Forest (*Sterland*). Marnham (*Thornley*). Nottingham and West Bridgford, 'common' (*Pike, Simmons*).

A. puta Hübn. Rare. Calverton (*Saunt*).

A. nigricans L. Locally common. Sherwood Forest. Work-sop, occasional (*Lady Robinson*). Wellow (*Becher*). Mansfield, occasionally at sugar (*Daws*). 'A pest at sugar in Nottingham gardens, July 1883' (*W. T. Wright*). West Bridgford, common (*Simmons, Wallis*). Langford Moor (*Saunt*).

A. tritici L. Rather frequent in Sherwood Forest. Near Edwinstowe on ragwort flowers at night, 18—25. viii. 1890 (*A. E. Hall and J. Batty*). Several taken from ragwort flowers in Sherwood Forest, 13—17. viii. 1894: all were of an almost black form (*Porritt in Naturalist*, 1894, p. 367). Wellow (*Becher*). Mansfield, rather scarce (*Daws*). Mapperley, Nottingham, 26. vii. 1914 (*Thornley*).

The var. *aquilina* is recorded for Edwinstowe and Wellow by Rev. W. Becher.

A. obelisca Hübn. Very rare. Sherwood Forest, rare (*Sterland, Brameld*). Langford Moor, one, Sept. 1911 (*Saunt*).

A. exclamationis L. Abundant throughout the county.

A. ypsilon Rott. (*A. suffusa* Hübn.). Frequent and widely distributed. Edwinstowe and Wellow (*Becher*). South Leverton, rare (*Thornley*). Cauldwell Wood near Mansfield, at sugar, 20. ix. 1892 (*Daws*). Stapleford, 1911-12 (*Dawson*). Radford; Basford; Bulwell; etc., sparingly. West Bridgford, common (*Simmons*). Frequent at Chilwell, at light, sugar, and ivy bloom (*Pearson*). Langford Moor (*Saunt*).

A. strigula Thnb. Local and scarce. Clumber Park, one on heather, 1891 (*Rev. F. G. Alderson*). Shireoaks, 20. and 24. vii. 1900 (*Houghton*). Mansfield district, frequent, and usually taken on flowers by day (*Daws*).

A. praecox L. Very rare. Sherwood Forest, once (*Sterland*). Marnham, an undoubted specimen taken in vicarage by Rev. E. Cunningham (*Thornley*).

A. saucia Hübn. Uncommon. Sherwood Forest, rare (*Brameld*); two specimens, Sept. 1858 (*J. Wilson and T. Grace*). Edwinstowe (*Becher*). Cauldwell Wood near

Mansfield, at sugar, 6. x. 1892 (*Daws*). Nottingham district, scarce. Chilwell, at ivy bloom, 19. x. 1893 (*Pearson*). Langford Moor, 1913 (*Saunt*). Widmerpool once (*Simmons*).

A. agathina Dup. 'Occurs regularly in Sherwood Forest' (*W. G. Sheldon* in *F. M. M.*, 1890, p. 139). 'Rare in Nottinghamshire' (*Barrett, Br. Lep.*, iii. 362).

A. obscura Brahm. Rare. One example in Clumber Park at rest on palings, 1891 (*F. G. Alderson*). Wellow (*Becher*). South Leverton, several specimens at sugar in vicarage garden in 1896; also one example in the vicarage, 12. vii. 1901 (*Thornley*). Langford Moor near Newark, 1910 (*Saunt*).

NOCTUA Guen.

N. augur Fab. Common in the Worksop, Retford, Mansfield, Southwell, Newark and Nottingham districts.

N. glareosa Esp. Sherwood Forest, very plentiful in some seasons on heather and at sugar. Sparingly at Berry Hill, Mansfield (*Daws*).

N. castanea Esp. All our specimens appear to be the var. *neglecta* Hübn. Sherwood Forest, not uncommonly (*Sterland, Madden, Birchall* and others).

N. baia Fab. Not common. Sherwood Forest, frequent. Cauldwell Wood and Berry Hill, Mansfield, not common (*Daws*). Scarce in the Nottingham district: taken at Basford, Radford, Wollaton, etc. Calverton; Epperstone Park (*Saunt*).

N. c-nigrum L. Generally distributed and common, Worksop (*Lady Robinson*). Sherwood Forest. Wellow (*Becher*). South Leverton, common at sugar (*Thornley*). Mansfield district in fair numbers (*Daws*). Nottingham and district, common. Chilwell, common at light and ivy bloom (*Pearson*). Calverton; Epperstone; Langford Moor (*Saunt*). Bunny, common (*G. Pike*).

N. triangulum Hufn. Local and not common. Sherwood Forest, occasional (*Brameld*); one at sugar, 28. vii. 1893 (*Lady Robinson*). Chilwell, one specimen, 13. vii. 1895 (*Pearson*). West Bridgford (*Simmons*). Sneinton Dale, Nottingham (*Saunt*).

N. brunnea Fab. Fairly general, but nowhere plentiful. Sherwood Forest, frequent (*Sterland*); twice taken (*Brameld*); at sugar, 28. vii. 1893; one bred, 25. vi. 1893, from larva found in Clumber Park (*Lady Robinson*). Wellow

(*Becher*). Mansfield, at sugar, 8. vii. 1897, not common (*Daws*). In several localities about Nottingham, sparingly. Widmerpool (*Simmons*).

N. primulae Esp. (*N. festiva* Hübn.). Widely distributed and common. Worksop; Sherwood Forest; Wellow; etc. Mansfield district, some seasons very common: the var. *conflua* occasionally (*Daws*). South Leverton, occasional (*Thornley*). Southwell (*Becher*). Oxtou (*Saunt*). Common about Nottingham in many places.

N. dahlia Hübn. Common in Sherwood Forest, rare elsewhere. Often very abundant at sugar in the Forest near Edwinstowe. Fairly common some seasons at Cauldwell Wood near Mansfield (*Daws*). Langford Moor, 29. viii. 1906. One specimen at Basford, 1899 (*Henderson*). One at Widmerpool (*Simmons*).

N. rubi View. Not generally common. Edwinstowe and elsewhere in Sherwood Forest, sometimes common. Wellow; Southwell (*Becher*). Fairly numerous at sugar in some seasons at Cauldwell Wood near Mansfield (*Daws*). Chilwell, frequent (*Pearson*). Basford (*Henderson*).

N. umbrosa Hübn. Moderately common. Sherwood Forest, common (*Brameld*). Wellow (*Becher*). South Leverton, a few at sugar (*Thornley*). Cauldwell Wood near Mansfield, fairly numerous some seasons at sugar (*Daws*). Upton near Southwell (*Wynne*). Nottingham, not common. Chilwell, not rare at thistle heads (*Pearson*). Kingston-upon-Soar, common, Aug. 1904 (*Thornley*). Epperstone, 1912 (*Saunt*).

N. xanthographa Fab. Very common, and generally distributed. Sherwood Forest, abundant at sugar. South Leverton, generally abundant (*Thornley*). Mansfield district, common at sugar (*Daws*). Southwell (*Becher*). Nottingham district, common.

N. plecta L. Fairly common and general. Worksop, occasionally (*Lady Robinson*). Sherwood Forest, common (*Brameld*). Wellow (*Becher*). South Leverton, rare (*Thornley*). Fairly common at sugar about Mansfield (*Daws*). Stapleford, 1911-12 (*Dawson*). Nottingham district, moderately common. Bunny; Widmerpool (*Simmons*). Calverton; Epperstone (*Saunt*).

AXYLIA Hübn.

A. putris L. Frequent. Sherwood Forest, common (*Brameld*). Worksop, occasional (*Lady Robinson*). Marnham (*Thornley*).

Mansfield, rather rare (*Daws*). Nottingham, June 1883, common at sugar (*W. T. Wright*). Broxtowe (*Pike*). West Bridgford, occasionally (*Simmons, Wallis*). Chilwell, not common, pupae dug from roots of apple trees (*Pearson*). Stapleford (*Dawson*).

TRIPHAENA Ochs.

- T. comes** Hübn. (*T. orbona* Fab.). Common and generally distributed. Worksop; Clumber Park; Edwinstowe; Ollerton; Wellow; Nottingham and surrounding district (*Carr*). South Leverton; Marnham; Kingston-upon-Soar (*Thornley*). Southwell (*Becher*). Bunny (*Leivers*).
- T. orbona** Hufn. (*T. subsequa* Hübn.). Sherwood Forest only, rare. One specimen, Aug. 1860 (*W. Talbot* in *Ent. Wkly. Intell.*, viii. 179). 'Several times' (*Sterland*). At sugar, near Edwinstowe, several times (*J. R. Hardy*).
- T. pronuba** L. Abundant throughout the county, and excessively variable. June 20—Sept. 12.
- T. fimbria** L. Local and not common. Sherwood Forest near Edwinstowe, frequent. Wellow (*Becher*). Cauldwell Wood and Berry Hill, Mansfield, frequent at sugar (*Daws*). South Leverton, rare (*Thornley*). Langford Moor, 1913; Oxtun, 1909 (*Saunt*). West Bridgford, once (*Simmons*). West Leake Hills, 5. viii. 1906. Bunny, rare at sugar (*Leivers*).
- T. ianthina** Esp. Fairly distributed, but not common. Worksop (*Lady Robinson*). Frequent in Sherwood Forest. Wellow (*Becher*). South Leverton and Marnham, not common (*Thornley*). Upton near Southwell (*Wynne*). Mansfield, rare (*Daws*). Chilwell, at sugar, not common (*Pearson*). One or two at West Bridgford (*Wallis*). Sneinton Dale, Nottingham, 1909-10 (*Saunt*).
- T. interjecta** Hübn. Widespread but scarce. Near Worksop (*Lady Robinson*). Sherwood Forest, frequent (*Brameld*). Marnham (*Cunningham*). Rather scarce at Mansfield (*Daws*). Southwell (*Becher*). Chilwell (*Pearson*). West Bridgford, once (*Simmons*).

EUROIS Hübn.

- E. prasina** Fab. Local and scarce. Sherwood Forest, rare (*Brameld*). Cauldwell Wood, Mansfield, at sugar, 12. vii. 1896 (*Daws*). Epperstone, 1911 (*Saunt*). Widmerpool and Bunny, not common.

- E. occulta** L. Local and rare. Sherwood Forest (*Sterland*); one specimen, Aug. 1872 (*Madden*). Thieves Wood near Mansfield, one specimen at sugar, 17. viii. 1889 (*Daws*). Southwell, one at sugar in 1881 (*W. Baker, Entom.*, 1881), and one taken more recently in the same locality by Rev. W. Becher.

APLECTA Guen.

- A. tincta** Brahm. (?). Sherwood Forest, occasional (*Sterland*). Requires confirmation.
- A. advena** Fab. Scarce. Sherwood Forest, occasional (*Sterland*). South Leverton, a very fresh example at sugar, 24. vi. 1901; Marnham (*Thornley*). Widmerpool (*Simmons*). Chilwell, 23. v. 1893 (*Pearson*). Bunny Wood, one specimen, 30. vi. 1900.
- A. nebulosa** Hufn. Very frequent in Sherwood Forest (Clumber Park, the Birklands, and Bilhagh). Edwinstowe and Wellow (*Becher*). Fairly common at sugar in several places about Mansfield (*Daws*). Epperstone, 1911 (*Saunt*). Broxtowe Wood near Nottingham (*Henderson*). Chilwell, two specimens at rest, 8. viii. 1897 (*Pearson*). Widmerpool and Bunny.

MAMESTRA Hübn.

- M. brassicae** L. Very common everywhere.
- M. persicariae** L. Fairly common, but unrecorded from many districts. Sherwood Forest, infrequent. Upton (*Wynne*). Wellow (*Becher*). Stapleford, common (*Dawson*). Kimberley (*Thornley*). Nottingham and Lenton, common. Chilwell, common (*Pearson*).
- M. albicolon** Hübn. Sherwood Forest, rare (*Brameld*).
- M. oleracea** L. Very common everywhere in the county.
- M. genistae** Bork. Sherwood Forest, rare (*Brameld*). Wellow, one specimen at sugar, 13. vii. 1888 (*Becher*).
- M. dissimilis** Knoch. Local and rare. Sherwood Forest, rare (*Brameld*). Wellow (*Becher*). Two specimens at Basford (*Henderson*). Whitmoor, Radford (*G. Pike*). Chilwell (*Pearson*). 'Plentiful at West Bridgford in 1902' (*Wallis*).
- M. thalassina** Rott. Widely distributed and frequent. Sherwood Forest (*Brameld, Porritt*). Clumber Park (*Lady Robinson*). South Leverton, not uncommon; Marnham

(*Thornley*). Southwell (*Becher*). Mansfield district, frequent (*Daws*). Epperstone, 1910 (*Saunt*). High Park Woods, Beauvale, 15. vi. 1905. Common about Nottingham (*Pike*). West Bridgford, occasional (*Simmons*). Chilwell (*Pearson*).

M. contigua Vill. Confined to Sherwood Forest where it is frequent, *e.g.*, in Clumber Park, the Birklands, Rufford, etc. Mr. W. Daws has taken several specimens at Ratcher Hill near Mansfield.

M. pisi L. Fairly common, and probably generally distributed. Sherwood Forest, common (*Brameld*). Shireoaks (*Houghton*). Wellow (*Becher*). Marnham, several (*Thornley*). Thieves Wood near Mansfield, a few (*Daws*). Occasionally common about Nottingham (*Carr*). 'I have taken scores of larvae round Basford, on nettle, bramble, crab, etc.: imagines only occasionally' (*Henderson*). Stapleford, common (*Dawson*).

M. trifolii Rott. Local and uncommon. Wellow and Southwell (*Becher*). West Bridgford (*Wallis*).

M. dentina Esp. Widely dispersed but not common. Worksop, often netted at flowers of red valerian in Park House gardens (*Rev. F. G. Alderson*). Shireoaks (*Houghton*). South Leverton; Marnham (*Thornley*). Mansfield, not common (*Daws*). Oxtun, 1909 (*Saunt*). Wollaton (*Pike*). Widmerpool (*Simmons*).

DIANTHOECIA Bdv.

D. capsincola Hüb. Sherwood Forest, frequent (*Sterland*, *Brameld*). Ollerton and Wellow (*Becher*). Dozens bred in 1899 from larvae taken about Basford, where they are always common (*Henderson*). Lenton (*Pike*). Many bred from capsules of red and white campion collected at Barton, 1900 (*Pearson*). Gotham and Kingston-upon-Soar, larvae common in capsules of *Lychnis alba*, 30-31. vii. 1908 (*Thornley*). Cotgrave (*Simmons*). West Bridgford (*Wallis*).

D. cucubali Fues. Sherwood Forest, rare. Recorded thence by *Sterland*, *Brameld* and *J. R. Hardy*.

D. carpophaga Bork. Local and rare. Sherwood Forest (*Sterland*). On railway banks near Worksop, not common, end of July 1897 (*Hardy*). Worksop, 1901 (*Houghton*).

HECATERA Guen.

H. serena Fab. Local and scarce. Sherwood Forest, three times (*Sterland*), twice (*Brameld*). Basford, Nottingham,

three specimens taken in 1900 (*Henderson*). One at West Bridgford (*Wallis*). Kingston-upon-Soar, 21. vii. 1913, two specimens at rest in village—one on stone wall, one on paling (*Thornley*). Oxtou; Bobbers Mill, Nottingham (*Saunt*). Stapleford, 1913 (*Dawson*).

NEURIA Guen.

N. reticulata Vill. Not common. Sherwood Forest, occasionally (*Sterland*, *Brameld*): taken also by R. and W. Tyrer, G. T. Porritt, and J. R. Hardy. Mansfield, three or four specimens only (*Daws*). Occasionally about Nottingham: in July, 1900, I took eight specimens in one evening at Basford (*Henderson*). Basford (*Pike*, *Simmons*). Widmerpool (*Simmons*).

EPINEURONIA Rbl. (*Neuronia* Hüb.).

E. popularis Fab. Common and widely distributed. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common at light; Marnham (*Thornley*). Mansfield, rather frequent (*Daws*). Nottingham district, common on lamps. Stapleford, common (*Dawson*). Very common on gas lamps at Chilwell in Aug. and Sept. 1893, including several females (*Pearson*). Kingston-upon-Soar, Aug. 1911 (*Thornley*). Oxtou; Epperstone (*Saunt*).

THOLERA Hüb.

T. cespitis Fab. Occurs frequently in Sherwood Forest from Shireoaks to Edwinstowe and Wellow. Has been taken at flowers of ragwort in the daytime, flying over heather, and at sugar and light.

CHARAEAS Steph.

C. graminis L. Widespread and common. Sherwood Forest, common: some years very abundant on ragwort. South Leverton, some years common at light; Marnham (*Thornley*). Thieves Wood near Mansfield, frequent (*Daws*). Langford Moor, on ragwort, 1912. Bulwell Forest (*Henderson*). Nottingham, occasional. Three specimens in garden at Mapperley, Nottingham, 29. vii. 1911 (*Thornley*). Wollaton (*Saunt*). Chilwell, at light, but not common (*Pearson*). Stapleford (*Dawson*).

HADENA Schrk.

H. adusta Esp. Local and scarce. Sherwood Forest (*Sterland, Brameld*). Clumber Park, 18. v. 1893 (*Lady Robinson*). South Leverton, one ♀ on vicarage window, 5. vi. 1901 (*Thornley*). Frequently taken in my garden at Mansfield (*Daws*).

H. protea Bork. Very local and usually far from common. Sherwood Forest, 'common' (*Brameld, etc.*). Edwinstowe (*Becher*). Mansfield district, often taken at sugar (*Daws*). Langford Moor (*Saunt*). Wollaton, scarce (*Pearson*).

BOMBYCIA Steph.

B. viminalis Fab. Local and scarce. Sherwood Forest, rare (*Brameld*). Rufford (*Becher*). Mansfield, 20. vii. 1894; frequently found in larval state (*Daws*).

EREMOBIA Steph.

E. ochroleuca Esp. Sherwood Forest, rare (*Brameld*).

TRACHEA Hübn.

T. atriplicis L. Sherwood Forest, once (*Sterland*).

HYPPA Dup.

H. rectilinea Esp. Sherwood Forest, once taken (*Sterland*).

DILOBA Bdv.

D. caeruleocephala L. Widely distributed and common. Sherwood Forest, common (*Sterland, Brameld*). Worksop, larvae only (*Lady Robinson*). Ollerton; Wellow; Southwell (*Becher*). South Leverton, some years abundant at light: I once counted 14 specimens on the lamp in the church porch (*Thornley*). Marnham (*Cunningham*). Mansfield, frequent at light: I find the larvae badly ichneumonised (*Daws*). Stapleford, common (*Dawson*). Beeston and Chilwell, abundant at light, larvae common on hawthorn (*Pearson*). West Bridgford, common (*Simmons*). Bestwood Park; Bunny; larvae common (*Henderson*). Edwalton; Plumtree; Lowdham (*Saunt*). Gotham, larvae abundant on hawthorn hedges.

LUPERINA Bdv.

L. testacea Hübn. Generally distributed and common. Shire-oaks, common (*Houghton*). Sherwood Forest, common.

Wellow ; Southwell (*Becher*). South Leverton, frequent at light and at sugar (*Thornley*). Mansfield district, often taken at light (*Daws*). Chilwell, common at light (*Pearson*). Nottingham ; West Bridgford. Lenton, common (*Pike*). Common at Kingston (*Thornley*). Langford Moor (*Saunt*).

CERIGO Steph.

C. matura Hufn. Common in Sherwood Forest, scarce elsewhere. Common at sugar in the Forest. Shireoaks (*Houghton*). Wellow (*Becher*). South Leverton, one example at sugar in vicarage garden, 23 vii. 1901 (*Thornley*). Mansfield, occasionally at sugar and at light (*Daws*). Upton near Southwell (*Wynne*). Langford Moor near Newark. Chilwell, scarce (*Pearson*). West Bridgford, one specimen only (*Simmons*). Tollerton, 24. vii. 1910 (*Saunt*).

HAMA Steph.

H. sordida Bork. Sherwood Forest, common (*Sterland, Brameld*). Worksop, 1901 (*Houghton*). Wellow (*Becher*). South Leverton, several at sugar and light, 1899—1901 (*Thornley*). Mansfield, rather scarce: taken at flowers in my garden, 23. vi. 1895, etc. (*Daws*). Whitemoor, Nottingham, common (*Pike*).

H. furva Hübn. Sherwood Forest, rare. Once taken (*Sterland*). Park House gardens, Worksop, 30. vi. 1894 ; Sparken Hill, 1891 (*Lady Robinson*).

APAMEA Ochs.

A. gemina Hübn. Fairly distributed and common. Park House gardens, Worksop (*Lady Robinson*). Wellow (*Becher*). Marnham (*Cunningham*). Mansfield district, in numbers and variety (*Daws*). West Bridgford, common (*Simmons*). Basford (*Carr*). Chilwell, at sugar, not common (*Pearson*). Epperstone, 1910 (*Saunt*).

A. basilinea Fab. Widely distributed and common. Sherwood Forest, common. Common at Worksop, Clumber Park, etc. (*Lady Robinson*). Wellow ; Southwell (*Becher*). South Leverton, common ; Marnham (*Thornley*). Mansfield, very common at raspberry flowers in my garden (*Daws*). Nottingham district, very common from May 18 to end of June (*Carr*). Chilwell, not common (*Pearson*). Widmerpool (*Simmons*). Oxtun (*Saunt*).

A. unanimitis Tr. Local and rare. Sherwood Forest, twice (*Brameld*). Chilwell, 18. vi. 1892, at light: 'only one

specimen taken, but what I take to be the larva of this species is fairly common in the stems of ribbon-grass' (*Pearson*). Epperstone, 1910 (*Saunt*).

- A. pabulatricula** Brahm. (*A. connexa* Bork.). Very rare. Four specimens at sugar half-way between Worksop and Edwinstowe, 1885 and 1886: also taken by two other collectors (*J. R. Hardy*).
- A. secalis** L. (*A. didyma* Esp., *oculea* Gn.). Very common and universally distributed.

MIANA Steph.

- M. strigilis** Clerck. Common throughout the county: the var. *aethiops* Haw. is recorded from Worksop (*Lady Robinson*) and Chilwell (*Pearson*).
- M. fasciuncula** Haw. Common throughout the county.
- M. literosa** Haw. Sherwood Forest (*Sterland* and *Brameld*). Apparently not seen recently.
- M. bicoloria** Vill. Sherwood Forest (*Brameld*). Nottingham, 'common at sugar,' June 1883 (*W. T. Wright*). Sneinton Dale, Nottingham, one specimen, Aug. 1909 (*Saunt*). One at West Bridgford (*Wallis*).

XYLOPHASIA Steph.

- X. rurea** Fab. Moderately common in all parts of the county, both the type and var. *alopecurus* Esp.
- X. lithoxylea** Fab. Distributed throughout the county, and fairly common.
- X. sublustris** Esp. Distributed throughout the county, but scarce. Sherwood Forest, rare (*Brameld*). South Leverton, one at sugar, July 1899 (*Thornley*). Mansfield, at intervals (*Daws*). Southwell (*Becher*). Basford, and elsewhere about Nottingham, but not common (*Henderson*). Chilwell, not common (*Pearson*). Common at West Bridgford in 1902 (*Wallis*). Bunny, a few (*Pike*).
- X. monoglypha** Hufn. Everywhere very abundant.
- X. hepatica** L. Widely distributed and of frequent occurrence. Sherwood Forest (*Brameld*). South Leverton, not uncommon; Marnham (*Thornley*). Wellow (*Becher*). Mansfield, occasional (*Daws*). Nottingham. Chilwell, not common (*Pearson*). Bunny (*Pike*). Widmerpool (*Simmons*). Epperstone, 1910 (*Saunt*).

- X. scolopacina** Esp. Frequent in Sherwood Forest. Mansfield, at raspberry flowers, 17. vii. 1896 (*Daws*).

APOROPHYLA Guen.

- A. nigra** Haw. Sherwood Forest near Edwinstowe, scarce. Wellow (*Becher*). Oxtou, 1909 (*Saunt*).

DASYPOLIA Guen.

- D. templi** Thnb. Rare. One specimen taken in 1893 or 1894 on the doorstep of Park House, Worksop (*Lady Robinson*). Mansfield, at gas lamps; and found among gas-coke at Sherwood Foundry, probably attracted by the light from the furnace, 10. x. 1890 (*Daws*). Chilwell, at light, 6. x. 1894 (*Pearson*).

POLIA Tr.

- P. flavicincta** Fab. Local. Sherwood Forest, rare (*Brameld*). Southwell (*Becher*). South Leverton, common both at sugar and at light in September (*Thornley*). Marnham (*Cunningham*). Owthorpe, 1908; Langford Moor, 1909 (*Saunt*).

- P. chi** L. Widely distributed and frequent, often common. Worksop; Budby; Ollerton; Wellow. South Leverton, occurs every year on walls in village, but is not nearly so common as *P. flavicincta* (*Thornley*). Mansfield district, occasionally, with var. *olivacea* Steph.; I have reared it from larvae found on the male-fern, *Lastrea filix-mas* (*Daws*). Southwell (*Becher*). Common on stone walls at Kimberley and Cinder-hill; var. *olivacea* at Arnold (*Henderson*). Rather common in and about Nottingham. Chilwell, common on walls, and bred from larvae reared on *Doronicum* (*Pearson*). Kingston-upon-Soar (*Thornley*).

BRACHIONYCHA Hübn.

- B. sphinx** Hufn. Rare. Mansfield, a few at light, 10. x. 1890, etc. (*Daws*). Bunny (*Simmons*).

MISELIA Ochs.

- M. oxyacanthae** L. Generally distributed and common. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Ollerton; Wellow; Southwell (*Becher*). South Leverton, common at sugar; Sutton near Retford; Marnham (*Thornley*). Fairly common in most places about

Mansfield, both at sugar and at light (*Daws*). Nottingham district, common. Chilwell, common at ivy bloom and light (*Pearson*). Stapleford, common (*Dawson*).

The var. *capucina* is sometimes nearly as common as the type.

AGRIOPIS Bdv.

- A. aprilina** L. Frequent in Sherwood Forest—'common' according to Sterland and Brameld. Larvae and pupae frequently taken in the Forest. Worksop district, once or twice (*Lady Robinson*). Rainworth (*Becher*). A few specimens taken at Thieves Wood near Mansfield, 30. x. 1888 (*Daws*). Epperstone, 1909; Langford Moor, 1910 (*Saunt*).

EUPLEXIA Steph.

- E. lucipara** L. Widely distributed and common. Clumber Park, on palings and at sugar, fairly common (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton; Treswell Wood; Marnham (*Thornley*). Mansfield (*Brameld*). Fairly common about Mansfield: I have taken the larvae frequently on bracken (*Daws*). Nottingham and surrounding district, common. Chilwell, not common (*Pearson*). Stapleford (*Dawson*).

PHLOGOPHORA Ochs.

- P. meticulosa** L. Common and generally distributed. Sherwood Forest, common. Worksop district, frequent (*Lady Robinson*). Edwinstowe; Ollerton; Wellow; Southwell (*Becher*). South Leverton, some years very common at sugar in autumn: taken also on May 25 and 26, 1899, at South Leverton and Sturton; Marnham (*Thornley*). Mansfield district, common: in 1895 I took a good series at Thieves Wood between the 7th and 10th of December (*Daws*). Nottingham and district, common. Chilwell, at light and sugar: larvae common on pelargonium and white convolvulus (*Pearson*). Stapleford (*Dawson*).

MANIA Tr.

- M. maura** L. Generally distributed and moderately common. Sherwood Forest, frequent (*Brameld*). Worksop (*Lady Robinson*). Retford (*H. Hillman*). Marnham (*Cunningham*). Southwell (*Becher*). Mansfield, frequent, especially at the Hermitage Mill-dam (*Daws*). Langford Moor, Newark (*Saunt*). Nottingham; Broxtowe; West Bridgford; occasional (*Carr*).

Stapleford (*Dawson*). Chilwell, frequent in outhouses and at sugar (*Pearson*). Kingston (*Thornley*). Lambley Dumble (*Hillman*). Bunny, at sugar (*Leivers*).

NAENIA Steph.

N. typica L. Fairly common and general. Sherwood Forest, common. Worksop, common: one bred from larvae found on peach (*Lady Robinson*). Wellow (*Becher*). South Leverton, at sugar; Marnham (*Thornley*). Mansfield district, frequent, but not common (*Daws*). Langford Moor; Basford (*Henderson*). West Bridgford, common (*Simmons*). Chilwell, fairly common (*Pearson*). Stapleford (*Dawson*). Kingston (*Thornley*). Wollaton; Epperstone (*Saunt*).

HELOTROPHA Led.

H. leucostigma Hübn. Rare, and not recorded recently. Sherwood Forest, several times (*Sterland*); occasionally (*Brameld*). Recorded by both observers as *Apamea fibrosa*.

HYDROECIA Guen.

H. nictitans Bork. Widely distributed and fairly common. Worksop (*Houghton*). Sherwood Forest near Edwinstowe, etc., on ragwort flowers at night, and at sugar, frequent. Wellow (*Becher*). South Leverton, comes to light freely about the middle of August; Marnham (*Thornley*). Fairly common at Mansfield (*Daws*). Stapleford, common (*Dawson*). Chilwell, fairly common and very variable (*Pearson*). Wollaton (*Pike*). Widmerpool (*Simmons, Pike*). Nottingham; Epperstone (*Saunt*).

H. micacea Esp. Moderately common and widespread. Sherwood Forest, common (*Brameld*). Shireoaks, common (*Houghton*). Wellow (*Becher*). Marnham; South Leverton, occasionally at sugar (*Thornley*). Mansfield, not common (*Daws*). Stapleford (*Dawson*). Nottingham; Lenton; Basford; West Bridgford; occasionally on lamps and at sugar. Sneinton Dale, Nottingham (*Saunt*). Chilwell, fairly common at light (*Pearson*).

GORTYNA Hübn.

G. ochracea Hübn. Frequent and fairly general. Worksop (*Houghton*). Sherwood Forest, frequently taken, especially in larval and pupal states in stems of thistle, burdock, etc. South Leverton, occasionally at light (*Thornley*). Mansfield,

frequent: larvae in stems of thistle, potato, foxglove and elder (*Daws*). Southwell (*Becher*). Stapleford (*Dawson*). Old Basford, larvae in stems of thistles (*Henderson*). West Bridgford, occasionally (*Simmons*, *Wallis*). Chilwell, plentiful on gas-lamps; also taken at sugar 17. ix. 1895 (*Pearson*). Nottingham; Carlton; Langford Moor (*Saunt*).

NONAGRIA Ochs.

N. typhae Thnb. (*N. arundinis* Fab.). Rare and local. Sherwood Forest, frequently (*Brameld*). Taken at King's Mill and Reed Mill dams near Mansfield, 24. viii. 1888, 2. ix. 1892 (*Daws*). Southwell (*Becher*).

[*N. geminipuncta* Hatch. 'Sherwood Forest, once' (*Sterland*). Presumably an error.]

TAPINOSTOLA Led.

T. fulva Hübn. Local and uncommon. Sherwood Forest (*Brameld*, *Hardy*). Not common at Mansfield: a few near Cauldwell dam, 16. ix. 1894 (*Daws*). Old Basford, in marshy ground, resting near top of stems of rushes at dusk, first week in September (*Henderson*). Chilwell, on gas lamps; Wollaton (*Pearson*). Langford Moor, 1911 (*Saunt*).

CALAMIA Hübn.

C. lutosa Hübn. Only one record. 'I took a series in my garden at Mansfield at sugar, 12. viii. 1894—a strange place for this species' (*Daws*).

LEUCANIA Hübn.

L. pallens L. Common and generally distributed. Sherwood Forest, common (*Brameld*, etc.). Worksop (*Lady Robinson*). Wellow and Southwell (*Becher*). South Leverton, common at sugar and sometimes swarming at lime blossom; Marnham, abundant (*Thornley*). Upton (*Wynne*). Mansfield, fairly common at sugar (*Daws*). Common about Nottingham; Wollaton (*Carr*). Chilwell (*Pearson*). Bunny, at sugar (*Leivers*). Oxtun; Epperstone; Langford Moor (*Saunt*).

L. impura Hübn. Less common than the last species. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). Marnham (*Cunningham*). Mansfield, rather scarce (*Daws*). Common in marshy places wherever reeds abound (*Henderson*). West Bridgford,

common (*Simmons*). Chilwell (*Pearson*). Oxtou; Epperstone; Langford Moor (*Saunt*). Stapleford (*Dawson*).

L. comma L. Generally distributed and common. Sherwood Forest, common (*Brameld*, etc.). Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, common at sugar; Marnham (*Thornley*). Mansfield, some seasons in fair numbers (*Daws*). Upton (*Wynne*). Stapleford (*Dawson*). In profusion in and about Broxtowe Wood at sugar (*Henderson*). West Bridgford, common (*Wallis*). West Leake Hills, common amongst *Brachypodium sylvaticum*, 31. vii. 1906 (*Thornley*). Chilwell, fairly common at sugar and lime bloom (*Pearson*). Bunny, at sugar (*Leivers*). Wollaton; Oxtou; Epperstone; Langford Moor near Newark (*Saunt*).

L. lithargyria Esp. Fairly well distributed and common in places. Sherwood Forest, common (*Brameld*). Wellow (*Becher*). Mansfield, in fair numbers sometimes (*Daws*). South Leverton, common at sugar and light; Treswell Wood, several very fresh specimens clinging to grass stems, 15. vii. 1901; Marnham (*Thornley*). Nottingham district, frequent. Bunny (*Pike*).

L. conigera Fab. Local, and usually very scarce. Sherwood Forest, occasionally (*Brameld*). One in Steetley Wood near Worksop (*Lady Robinson*). Wellow (*Becher*). Marnham (*Cunningham*). Mansfield, not common (*Daws*). West Bridgford, common (*Simmons*).

L. turca L. Sherwood Forest, very rare. 'Once taken' (*Sterland*). 'One specimen under a log close to the Major Oak near Edwinstowe, 19. vi. 1896' (*J. R. Hardy*).

GRAMMESIA Steph.

G. trigrammica Hufn. Fairly common and general. Sherwood Forest, common (*Brameld*). Shireoaks (*Houghton*). Wellow (*Becher*). South Leverton, very common at sugar in July 1899, with some pretty varieties; Marnham (*Thornley*). Cauldwell Wood near Mansfield, at sugar, not common (*Daws*). Common about Basford, Broxtowe, West Bridgford, etc. Chilwell, not common (*Pearson*). Nottingham; Wollaton; Calverton (*Saunt*). Stapleford (*Dawson*).

STILBIA Steph.

S. anomala Haw. Sherwood Forest only, rare. 'Once taken' (*Sterland*). In August (20th to 24th) 1872, specimens were

taken there by Messrs. Porritt, Mosley, Madden and Howard Birchall (the latter speaks of it as 'well represented'). One specimen was taken by Lady Robinson in Clumber Park, 23. viii. 1895.

CARADRINA Ochs.

- C. morpheus** Hufn. Not general, but occasionally common. Sherwood Forest, common (*Brameld*). Shireoaks, common (*Houghton*). Wellow (*Becher*). Mansfield, at sugar, only three specimens taken (*Daws*). Stapleford, common (*Dawson*). West Bridgford, fairly common (*Wallis*). Wollaton; Epperstone (*Saunt*).
- C. alsines** Brahm. Only one record. Shireoaks, 23. vii. 1900 (*Houghton*).
- C. taraxaci** Hübn. Local and scarce. Sherwood Forest, frequent (*Brameld*). Ollerton; Wellow (*Becher*). Mansfield, rare (*Daws*). West Bridgford, fairly common (*Wallis*).
- C. quadripunctata** Fab. Widely distributed and fairly common. Sherwood Forest, common (*Sterland*, *Brameld*). Shireoaks (*Houghton*). Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, not uncommon (*Thornley*). Mansfield district, beaten commonly from haystacks (*Daws*). Stapleford, common (*Dawson*). Chilwell, at ivy bloom and light (*Pearson*). Sneinton Dale, Nottingham (*Saunt*).

PETILAMPA Auriv.

- P. arcuosa** Haw. Local, but sometimes common in marshy places. Sherwood Forest, common (*Brameld*). Shireoaks, common in July 1900; Worksop (*Houghton*). Laxton, (*Becher*). Langford Moor (*Saunt*). A few taken near Broxtowe Wood (*Henderson*). Chilwell; Attenborough; common in damp meadows at dusk (*Pearson*). Stapleford (*Dawson*).

RUSINA Steph.

- R. tenebrosa** Hübn. Widely distributed, but not general or very common. Sherwood Forest, common (*Sterland*, *Brameld*). Shireoaks, common (*Houghton*). Ollerton (*Wallis*). Wellow (*Becher*). Mansfield district, taken at sugar on one or two occasions only at Cauldwell Wood (*Daws*). West Bridgford, a few (*Wallis*). Bunny (*Pike*). Calverton (*Saunt*).

AMPHIPYRA Ochs.

- A. pyramidea** L. Plentiful in Sherwood Forest, especially in the Birklands, at sugar. Langford Moor, frequent (*Saunt*). Mansfield district, taken occasionally at sugar (*Daws*). Widmerpool (*Simmons*).
- A. tragopoginis** L. Common throughout the county.

PANOLIS Hübn.

- P. griseovariegata** Goeze. (*P. piniperda* Panz.). Very local. Sherwood Forest, several times (*Sterland*); also taken by J. R. Hardy. Clumber Park (*Lady Robinson*). A few larvae at Berry Hill, Mansfield (*Daws*). Langford Moor near Newark, several pupae under moss beneath pine trees, 6. iv. 1901: first emergence April 28. In same locality, 1911-12; Oxtou (*Saunt*).

PACHNOBIA Guen.

- P. leucographa** Hübn. Sherwood Forest, very rare, and not seen for many years. Taken once by *Sterland* and twice by *Brameld*.
- P. rubricosa** Fab. Rare. Sherwood Forest, frequent (*Sterland*, *Brameld*). Shireoaks in 1899 and 1901 (*Houghton*). Wellow, one at rest on window of vicarage, 1900 (*Becher*).

TAENIOCAMPA Guen.

- T. gothica** L. Common and generally distributed. Worksop district, common: sometimes abundant at sallow bloom (*Lady Robinson*). Sherwood Forest, Edwinstowe. Ollerton; Wellow; Southwell (*Becher*). South Leverton, a few: one on steps of vicarage, 16. ii. 1901 (*Thornley*). Mansfield district, at sugar and sallow bloom (*Daws*). 'In countless numbers at sugar and sallow bloom about Nottingham, April 1883' (*W. T. Wright*). Broxtowe, common on sallow bloom (*Henderson*). West Bridgford, common (*Simmons*). Chilwell, common at sallow (*Pearson*).
- T. miniosa** Fab. Sherwood Forest. Rare (*Brameld*); larvae common on oak, June 1871 (*Porritt*).
- T. pulverulenta** Esp. Common in the Forest district, scarce elsewhere. Sherwood Forest, common (*Sterland*, *Brameld*). Worksop district, Clumber Park, etc., common (*Lady Robinson*). Ollerton (*Becher*). Mansfield, fairly represented

some seasons (*Daws*). Nottingham district—Broxtowe, Wollaton, Chilwell, etc., not common.

T. stabilis View. Common and generally distributed. Worksop district, abundant: sometimes swarms at willow (*Lady Robinson*). Ollerton; Wellow; Southwell (*Becher*). Marnham (*Cunningham*). Mansfield district, fairly common at willows and sugar (*Daws*). Nottingham district, common at willows. Chilwell, common at willows (*Pearson*).

T. populeti Tr. Sherwood Forest, rare (*Brameld*). Southwell (*Becher*).

T. incerta Hufn. Generally distributed and common. Sherwood Forest, common (*Sterland*, *Brameld*). Worksop district, common at willows (*Lady Robinson*). Southwell (*Becher*). Mansfield district, fairly common at willows and sugar (*Daws*). 'Very abundant about Nottingham in April 1883 at sugar and willow bloom' (*W. T. Wright*). Broxtowe (*Henderson*). A few at West Bridgford and Widmerpool (*Wallis*). Chilwell, common at willows, and pupae plentiful at foot of oak trees (*Pearson*).

T. munda Esp. Occurs rather sparingly in the northern half of the county. Occasionally in the Worksop district, Clumber Park, etc. (*Lady Robinson*). Ollerton and Wellow (*Becher*). Sherwood Forest, 'common' (*Brameld*). Marnham (*Cunningham*). Mansfield, rather scarce (*Daws*). Nottingham (*Saunt*).

T. gracilis Fab. Widely distributed but not common. Sherwood Forest, frequent (*Brameld*). Worksop, 1901 (*Houghton*). South Leverton, one specimen, 16. iv. 1900 (*Thornley*). Rather common about Nottingham at sugar and willow bloom, April 1883 (*W. T. Wright*). Chilwell (*Pearson*). Larvae at Widmerpool (*Wallis*).

CALYMNIA Hübn.

C. pyralina View. Sherwood Forest, several times (*Sterland*). As no one else has taken it the record is open to doubt.

C. affinis L. Widely distributed but rather scarce. Sherwood Forest, occasional (*Sterland*); common (*Brameld*); also taken by J. R. Hardy. Wellow (*Becher*). Langford Moor (*Saunt*). One at West Bridgford (*Wallis*). Chilwell, rare: bred from larvae on elm, 24. vii. 1896 (*Pearson*). Bunny (*Pike*). Widmerpool (*Henderson*, *Simmons*).

C. diffinis L. Rare and local. Sherwood Forest, occasionally (*Sterland*). Worksop, 1901 (*Lady Robinson*). Southwell,

one at sugar about 1897, also six pupae dug at roots of elm (*Becher*). Chilwell, one at rest on tree trunk, 6. ix. 1891 (*Pearson*). Wollaton.

- C. trapezina** L. Widely distributed and very common. Abundant in Sherwood Forest. South Leverton and Treswell Wood, occasionally (*Thornley*). Southwell (*Becher*). Common at Thieves Wood and Berry Hill, Mansfield, at sugar (*Daws*). Annesley; Epperstone; Langford Moor (*Saunt*). West Bridgford, common (*Simmons*). Common in woods around Wollaton (*Henderson*). Chilwell and Bramcote, not common (*Pearson*). Thrumpton and Kingstons-upon-Soar, Aug. 1904 (*Thornley*). Widmerpool, not common (*Wallis*).

COSMIA Ochs.

- C. paleacea** Esp. Sherwood Forest has long been known as the headquarters of this species which often swarms there and may be taken at sugar by the hundred. Barrett remarks (*Brit. Lep.*, v. p. 310) 'in very favourable years, such as 1872, upwards of a thousand specimens have been captured without apparently affecting its abundance.'

In 1885 Mr. Daws took it at sugar in the Birklands at intervals throughout the period from August 3rd to October 12th. Lady Robinson has taken it in Clumber Park as early as July 3rd (1893). Once taken in Wellow Park (*Becher*). Moderately common at Langford Moor near Newark (*Henderson*).

DYSCHORISTA Led.

- D. suspecta** Hübn. Sherwood Forest, rare. Recorded by Brameld, Talbot, Madden, Porritt and Becher. Langford Moor, 1912-13 (*Saunt*).
- D. fissipuncta** Haw. (*D. epsilon* Bork.). Apparently very rare, as it is only recorded by Sterland and Brameld, both of whom give it as 'frequent' in Sherwood Forest.

PLASTENIS Bdv.

- P. retusa** L. Very rare. Recorded by J. R. Hardy as taken by him at sugar 'between Worksop and Edwinstowe' in July 1896, with *P. subtusa*.
- P. subtusa** Fab. Very rare. With *P. retusa*, as above. One specimen taken by L. A. Carr at Thorney in Aug. 1913.

CIRRHOEDIA Guen.

- C. xerampelina** Hübn. Some years very common in the Nottingham district. 'Common in certain localities about Nottingham, as at Lenton, Basford, Bulwell, Papplewick and Bingham, Aug. 16th to 31st, 1900. I took 43 specimens on one evening' (*Henderson*). West Bridgford, numerous in August 1900: over a dozen taken there on Aug. 20th (*Simmons*). Two specimens on a gas lamp at Bagthorpe, Nottingham (*Leivers*). Chilwell, at light, not common (*Pearson*). Southwell (*Becher*). Marnham (*Cunningham*). Cotgrave (*Saunt*).

ANCHOCELIS Guen.

- A. lunosa** Haw. Local and not very common. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). South Leverton, at light, scarce (*Thornley*). Berry Hill, Mansfield, both light and dark forms (*Daws*). West Bridgford, a few (*Simmons*, *Wallis*). Chilwell, fairly common at light and very variable (*Pearson*). Stapleford, 1911-12 (*Saunt*, *Dawson*).

ORTHOSIA Ochs.

- O. iota** Clerck. Frequent. Sherwood Forest, frequent (*Sterland*, *Brameld*). South Leverton, a few at sugar; Marnham (*Thornley*). Thieves Wood and Cauldwell Wood near Mansfield, in fair numbers at sugar (*Daws*). Southwell (*Becher*). Oxton (*Saunt*). Bulwell Forest (*Henderson*). West Bridgford, at intervals (*Simmons*). Chilwell, fairly common at ivy bloom and light (*Pearson*).
- O. macilenta** Hübn. Not common. Sherwood Forest, frequent (*Sterland*, *Brameld*). Marnham (*Cunningham*). Thieves Wood and Cauldwell Wood near Mansfield, in fair numbers at sugar (*Daws*). Oxton (*Saunt*). Bulwell Forest, one specimen only (*Henderson*). Chilwell (*Pearson*).
- O. circellaris** Hufn. Generally distributed and common. Sherwood Forest. Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common at light; Marnham (*Thornley*). Common at sugar about Mansfield (*Daws*). Nottingham district, common. Chilwell, common at ivy bloom (*Pearson*).
- O. helvola** L. (*O. rufina* Hübn.). Local and scarce. Sherwood Forest, occasional (*Brameld*). Wellow (*Becher*). Fairly common at sugar at Berry Hill and Thieves Wood near Mansfield (*Daws*). Langford Moor (*Saunt*).

- O. lychnidis** Schiff. (*O. pistacina* Fab.). Common and general. Sherwood Forest, common (*Sterland, Brameld*). Shireoaks (*Houghton*). Wellow; Southwell (*Becher*). South Leverton, abundant at sugar in all varieties; Marnham (*Thornley*). Mansfield, fairly common and very variable (*Daws*). Nottingham district, common. Chilwell, fairly common at sugar, light and ivy bloom (*Pearson*). Stapleford (*Dawson*).
- O. litura** L. Fairly common and generally distributed. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, not uncommon at sugar (*Thornley*). Mansfield, in fair numbers at sugar (*Daws*). Nottingham district, common. Chilwell, fairly common at sugar and ivy bloom (*Pearson*). Stapleford (*Dawson*).

XANTHIA Ochs.

- X. citrigo** L. Very rare. Rufford Abbey, four specimens at rest on lime trunk, 20. viii. 1886, and one at sugar, 15. viii. 1893 (*Becher*).
- X. aurago** Fab. Very rare. Berry Hill, Mansfield, 27. ix. 1888 (*Daws*).
- X. lutea** Ström. (*X. flavago* Fab.). Not common. Sherwood Forest, occasionally (*Sterland, Brameld*). 'One specimen at Shireoaks, 11. ix. 1894, on a perfectly yellow leaf of hawthorn, prematurely autumn-tinted: the most perfect case of "protective resemblance" I ever saw' (*Lady Robinson*). Wellow (*Becher*). Taken at Berry Hill and in my garden at Mansfield (*Daws*). Marnham (*Cunningham*). Wollaton (*Pike*). Chilwell (*Pearson*).
- X. fulvago** L. Fairly general and common in places. Sherwood Forest, occasional (*Sterland, Brameld, Hardy*, etc.). Edwinstowe; Wellow; with ab. *flavescens* (*Becher*). South Leverton, not uncommon at sugar and light; Marnham (*Thornley*). Mansfield, odd specimens only in various years (*Daws*). Langford Moor; Oxtun; Calverton (*Saunt*). Nottingham, at gas lamps (*Leivers*). Common at Wollaton and Papplewick, with one or two ab. *flavescens* (*Henderson*). West Bridgford (*Wallis*). Chilwell, bred from sawfly (*Pearson*).
- X. gilvago** Esp. Very scarce. Sherwood Forest, rare (*Sterland, Brameld*). Wellow and Southwell (*Becher*). One specimen at Broxtowe, 1900 (*Henderson*). Occasionally

about West Bridgford (*Simmons*). Chilwell, at sugar and light, not common (*Pearson*). Sneinton Dale; Tollerton; Cropwell Bishop (*Saunt*).

HOPORINA Blanch.

- H. croceago** Fab. One poor specimen beaten from oak in Sherwood Forest, August 1896: 'species certain.' (*J. R. Hardy*).

ORRHODIA Hübner.

- O. vaccinii** L. Locally common, but not general. Sherwood Forest (Birklands, Clumber Park, etc.), frequent. Worksop (*Houghton*). Marnham (*Cunningham*). Fairly common at Thieves Wood near Mansfield (*Daws*). West Bridgford, common (*Simmons*). Wollaton (*Pike*). Chilwell, at ivy bloom, not common (*Pearson*).
- O. ligula** Esp. (*O. spadicea* Haw.). Common and general. Sherwood Forest, common. Shireoaks, common (*Houghton*). Wellow; Southwell (*Becher*). South Leverton, common at sugar, with ab. *subnigra* once (*Thornley*). Marnham (*Cunningham*). Fairly common at Thieves Wood (*Daws*). Oxtun (*Saunt*). Nottingham district, moderately common. Chilwell, common at ivy bloom (*Pearson*).
- O. rubiginea** Fab. Very rare. Two specimens taken at Mansfield, one at sugar, 10. x. 1888, and one stuck fast to some freshly tarred rails (*Daws*).

SCOPELOSOMA Curt.

- S. satellitia** L. Common in the Forest, less so elsewhere. Sherwood Forest, abundant (*Brameld*). Worksop and Clumber Park, common; larvae common on oak in Clumber Park (*Lady Robinson*). Wellow and Southwell (*Becher*). Marnham (*Cunningham*). Common in Thieves Wood in both larval and perfect states (*Daws*). Langford Moor, 1911-12 (*Saunt*). Nottingham district (Basford, West Bridgford, Beeston), scarce. Chilwell, at ivy bloom, and Wollaton at willows, not common (*Pearson*).

XYLINA Tr.

- X. socia** Rott. Doubtful. A single specimen recorded by J. Ray Hardy as taken by him near Worksop.
- X. ornithopus** Rott. Not taken for many years, if at all. Sherwood Forest, occasional (*Sterland*).

LITHOMOIA Hübn. (*Lithomoea* Hamps.).

- L. solidaginis** Hübn. A single example recorded by J. R. Hardy as taken by him in Sherwood Forest, 27. vii. 1898.

XYLOCAMPA Guen.

- X. areola** Esp. Very local. Rufford, two specimens at rest on tree trunks, 5. iv. 1886, and 14. iii. 1892 (*Becher*). South Leverton, not uncommon; Treswell, a pair on a tree trunk, and single specimens occasionally (*Thornley*). Mansfield, one or two only on gas lamps on the Chesterfield Road, 30. iii. 1890 (*Daws*).

CALOCAMPA Steph.

- C. exoleta** L. Frequent. Sherwood Forest, common (*Brameld*). Shireoaks, common, 24. x. 1898 (*Houghton*). Marnham (*Cunningham*). Ollerton (*Becher*). Several bred from larvae found feeding on turnip leaves at Teversall near Mansfield (*Daws*). A few taken around Basford (*Henderson*). Carlton near Nottingham (*Leivers*). Chilwell, bred 14. ix. 1895 (*Pearson*).
- C. vetusta** Hübn. Very rare. One specimen at Cauldwell Wood near Mansfield, at sugar, 6. x. 1885 (*Daws*). Chilwell, one at ivy bloom, 20. x. 1893, and one bred from larva found crawling on road (*Pearson*). Sneinton Dale, Nottingham (*Saunt*).

CUCULLIA Schrk.

- C. verbasci** L. Occasionally common in the larval stage. Sherwood Forest (*Sterland*, *Brameld*). Larvae at Ollerton and Wellow, and abundant at Southwell and at Laxton vicarage, 1900: imago not taken (*Becher*). North Leverton, larvae rather common on *Scrophularia aquatica* by side of Catchwater Drain, 6. vii. 1901 (*Thornley*). Bred from larvae taken at Halam near Southwell (*Henderson*).
- C. umbratica** L. Frequent and general. Sherwood Forest, common (*Brameld*). Park House gardens, Worksope (*Lady Robinson*). South Leverton, once only (*Thornley*). Wellow; Southwell (*Becher*). Mansfield, common at honeysuckle flowers (*Daws*). 'Nottingham, taken commonly off palings surrounding woods early in the morning, June 1883' (*W. T. Wright*). Basford, seven specimens in 1900 (*Henderson*). Lenton (*Pike*). West Bridgford, several

about 1902 (*Wallis*). Chilwell, not uncommon at honey-suckle and red valerian flowers (*Pearson*). Lowdham (*Thornley*). Flawforth near Plumtree (*Saunt*). Cotgrave (*Dawson*).

- C. chamomillae** Schiff. Rare and local. 'I took three in May 1898 at rest on palings, two at Old Basford and one at Bulwell' (*Henderson*). A few at West Bridgford (*Simmons*). Sometimes plentiful at West Bridgford, but none seen for several years (*Wallis*, 1912). Marnham (*Cunningham*).

ANARTA Hübn.

- A. myrtilli** L. Very local and uncommon. Sherwood Forest, common (*Brameld*); also taken by G. T. Porritt. Mansfield Forest, not common (*Daws*, *Henderson*). Langford Moor (*Leivers* and *Carr*).

HELIACA H.-S.

- H. tenebrata** Scop. Local, but sometimes common where it occurs. Sherwood Forest, occasionally (*Sterland*, *Brameld*). Osberton near Worksop (*Lady Robinson*). South Leverton, common by lane sides and in hay fields early in June; Treswell Wood, abundant amongst long grass in the green drives, 4. vi. 1900 (*Thornley*). Chilwell, 9. vi. 1901 and 25. v. 1911 (*Pearson*). Normanton-on-the-Wolds, not uncommon (*Wallis*). Widmerpool, Owthorpe and Bunny, scarce (*Leivers*). Flawforth near Plumtree (*Saunt*).

PYRRHIA Hübn. (*Chariclea* Steph.).

- P. umbra** Hufn. Only one record, and not seen for many years. Sherwood Forest, frequent (*Sterland*).

HELIOTHIS Ochs.

- H. dipsacea** L. Rare. Sherwood Forest, twice (*Sterland*); rare (*Brameld*). Occurred flying over heather at Sherwood Forest in August 1873 (*Porritt*). A few taken flying by day in a clover field on the Chesterfield Road, Mansfield, 30. vii. 1884 (*Daws*).

ERASTRIA Ochs. (*Hydrelia* Guen.).

- E. uncula** Clerck. Sherwood Forest, once (*Sterland*). The only record.

PROTHYMNIA Hübner.

- P. viridaria** Clerck. Very local and scarce, possibly overlooked. Sherwood Forest, occasionally (*Brameld*). Occurs in fair numbers near Thieves Wood, on the roadside (*Daws*). Bunny (*Pike*).

GONOPTERINAE.

SCOLIOPTERYX Germ. (*Gonoptera* Latr.).

- S. libatrix** L. Universally distributed but rarely found in any great numbers.

QUADRIFINAE.

PLUSIA Ochs.

- P. moneta** Fab. This moth has only been known as a British species since 1890, in which year single specimens were taken in Kent and Sussex. Since then it has spread rapidly northwards and by 1911 had reached Notts. In June of that year Lady Robinson bred a specimen from a larva found on *Aconitum napellus* in the gardens of Park House, Worksop. On July 30, 1913 Mr. H. Hillman captured an imago in his garden on Woodborough Road, Nottingham.

- P. chrysitis** L. Fairly common and general. Sherwood Forest, common (*Brameld*). Very abundant some years about Worksop: generally some taken every season (*Lady Robinson*). Wellow (*Becher*). South Leverton, not uncommon: very common in 1901; Marnham (*Thornley*). Mansfield district, in fair numbers (*Daws*). Southwell, plentiful (*Henderson*). Nottingham, in great profusion at flowers of red dead nettle, June 1883 (*W. T. Wright*). West Bridgford; Cotgrave; Colwick (*Carr*). Chilwell, fairly common at light (*Pearson*). Stapleford, 1911-12 (*Dawson*). Gamston; Wollaton (*Saunt*).

- P. bractea** Fab. Very rare and not taken for many years, if really within our area at all. 'Sherwood Forest, a few times' (*Sterland*).

- P. festucae** L. Very rare. Sherwood Forest, occasional (*Sterland*); rare (*Brameld*).

- P. iota** L. Widely distributed and rather common. Sherwood Forest, common (*Brameld*). Worksop district, fairly common (*Lady Robinson*). Wellow; Southwell (*Becher*).

South Leverton, occasionally at light (*Thornley*). Rather common at Mansfield, *e.g.*, at honeysuckle flowers in my garden (*Daws*). Stapleford, 1911-12 (*Dawson*). Nottingham district, moderately common. Chilwell, fairly common at honeysuckle and red valerian flowers (*Pearson*). Widmerpool (*Leivers*). Wollaton; Ratcliffe-upon-Soar (*Saunt*).

P. pulchrina Haw. Frequent, but less common and well distributed than the last species. Sherwood Forest, occasional (*Sterland, Brameld*). Worksop, frequent (*Lady Robinson*). Ollerton (*Wallis*). Wellow; Southwell (*Becher*). South Leverton (*Thornley*). Mansfield, frequent at honeysuckle in my garden (*Daws*). West Bridgford, a few (*Simmons*). Chilwell, not so common as *P. iota* (*Pearson*). Stapleford, 1911-12-13 (*Dawson*).

P. gamma L. Common throughout the county and in some seasons very abundant, notably so in 1892 and 1900, when it occurred in boundless profusion. Taken as early as May 5th, and as late as October 30th.

P. interrogationis L. A single record only. Once in a garden at Edwinstowe (*Sterland*).

ABROSTOLA Ochs.

A. triplasia L. Fairly general and of frequent occurrence. Sherwood Forest, occasionally (*Sterland, Brameld*). Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, occasionally: common, together with *A. tripartita*, in 1901 (*Thornley*). Mansfield, fairly common (*Daws*). Southwell (*Henderson*). Nottingham (*W. T. Wright*). One at West Bridgford (*Wallis*). Chilwell, not common (*Pearson*). Stapleford, 1906-7 (*Dawson*).

A. tripartita Hufn. Taken in the same localities as the last species and in about equal numbers.

EUCLIDIA Ochs.

E. mi Clerck. Local, but often common where it occurs. Sherwood Forest, common (*Sterland, Brameld*); also taken there by G. T. Porritt. Fairly common in Clumber Park and elsewhere near Worksop (*Lady Robinson*). In profusion at Thorney (*Henderson*). Mansfield district, some seasons in fair numbers (*Daws*). Oxtun and Epperstone (*Saunt*). Common on the Foss Road near Widmerpool and Cotgrave, and at Bunny.

E. glyphica L. With the last species, but less common. Sherwood Forest, common (*Brameld*). Mansfield, not quite so common as *E. mi* (*Daws*). Thorney Woods (*Henderson*). Foss Road, Widmerpool and Cotgrave, frequent; Bunny, frequent (*Carr*). Epperstone (*Saunt*).

[*Catocala nupta* L. Sherwood Forest, occasional, but not common (*Sterland*). A doubtful record. *Sterland*'s further records of *C. sponsa* and *C. promissa*, each taken 'once' in Sherwood Forest, may be dismissed as more than improbable.]

HYPENINAE.

ZANCLOGNATHA Led.

Z. tarsipennalis Tr. Frequent. Sherwood Forest, rare (*Brameld*). Wellow (*Becher*). South Leverton, not uncommon at lime blossom in vicarage garden (*Thornley*). Mansfield, rather common (*Daws*).

Z. grisealis Hübn. Common and generally distributed. Sherwood Forest, common (*Brameld*). Shireoaks (*Houghton*). Wellow (*Becher*). Mansfield, common in gardens (*Daws*). Langford Moor (*Saunt*). Beauvale Woods (*Carr*). Stapleford (*Dawson*).

PECHIPOGON Hübn.

P. barbalis Clerck. Sherwood Forest (*Brameld*, *Porritt*). Clumber Park (*Lady Robinson*). Oxtou (*Saunt*).

HYPENA Schr.

H. proboscidalis L. Common and generally distributed. Sherwood Forest, abundant (*Brameld*). Worksop district, frequent (*Lady Robinson*). Edwinstowe; Ollerton; Rufford; Southwell (*Becher*). South Leverton, common (*Thornley*). Mansfield district, very common: taken from May 10 to end of October (*Daws*). Chilwell, common (*Pearson*). Stapleford (*Dawson*).

BREPHIDAE.

BREPHOS Ochs.

B. parthenias L. Sherwood Forest, not unfrequent (*Sterland*); occasionally (*Brameld*). Ollerton (*Becher*). Fairly common in Clumber Park, Drinking-pit Lane, etc; abundant flying

round birch trees near the Major Oak in Sherwood Forest ; in 1892 it was swarming near the Major Oak on April 4th ; in 1893 first seen on March 21st, abundant on the 29th (*Lady Robinson*). Gamston Wood near Retford (*Hillman*). Mansfield district, occasionally (*Daws*). A *Brephos* occurs at Langford Moor near Newark which is presumably this species.

- [*B. notha* Hübn. Sherwood Forest, once or twice (*Sterland*). Requires confirmation before it can be accepted. It has, however, been taken in Lincolnshire, not far from the Notts. border, so may well occur with us].

GEOMETRIDAE.

GEOMETRINAE.

PSEUDOTERPNA Hübn.

- P. pruinata** Hufn. Local and rare. Sherwood Forest, 'common' (*Brameld*) ; certainly not so now. Ollerton (*Becher*). South Leverton, a fine example in the vicarage garden, 14. viii. 1901 ; Marnham (*Thornley*). Langford Moor near Newark, 14. viii. 1910 (*Saunt*).

GEOMETRA L.

- G. papilionaria** L. Occurs only occasionally. Sherwood Forest, frequent (*Sterland*) ; twice (*Brameld*). Clumber Park, Sherwood Forest, occasionally found, flying about 9 p.m. ; also bred from larva found on birch (*Lady Robinson*). Ollerton (*Becher*). Caddow Wood, North Leverton, one specimen, 27. vii. 1900 ; Marnham (*Thornley*). Occurs very sparingly in the Mansfield district (*Daws*). Langford Moor, 14. viii. 1910 (*Saunt*). Wollaton, scarce (*Henderson*).

EUCHLORIS Hübn.

- E. pustulata** Hufn. Local and scarce. Sherwood Forest, frequent (*Brameld*). Epperstone, 29. vi. 1910 (*Saunt*). Three specimens at Bunny and one at Wollaton in June 1898 (*Pike*). Bunny ; Widmerpool ; Collingham (*Henderson*).

IODIS Hübn.

- I. lactearia** L. Well distributed, and common in some localities. Sherwood Forest, common (*Brameld*) ; rather common, June 1871 (*Porritt*). Wellow (*Becher*). Common at

South Leverton and Treswell Wood ; Marnham (*Thornley*). Mansfield, fairly distributed: common at Thieves Wood, June 1894 (*Daws*). Newstead Woods in numbers, June 1883 (*Wright*). A few at Broxtowe, June 1900 (*Pike*). Widmerpool (*Simmons*). Kinoulton (*Wallis*). Langford Moor ; Plumtree (*Saunt*). Stapleford (*Dawson*).

HEMITHEA Dup.

H. strigata Müll. Rather scarce. Sherwood Forest, frequent (*Brameld*). Wellow ; Southwell (*Becher*). Retford (*Hillman*). South Leverton, not uncommon: quite common in 1899 ; Marnham (*Thornley*). Langford Moor, 1910 (*Saunt*). Nottingham district, a good series secured in July 1883 (*Wright*). West Bridgford (*Wallis*). Chilwell, not common (*Pearson*). Stapleford (*Dawson*).

ACIDALIINAE.

ACIDALIA Tr.

- A. virgularia** Hübn. Frequent, but local. Sherwood Forest, common (*Brameld*). Worksop and Clumber Park, etc., occasional (*Lady Robinson*). Wellow and Southwell (*Becher*). Nottingham, 3. vii. 1901 (*Carr*). Rather common in garden at Mapperley, Nottingham, 23. vii. 1909 (*Thornley*). Carlton (*Saunt*). Chilwell, occasionally, e.g., 17. vi. and 29. vii. 1895 (*Pearson*).
- A. interjectaria** Bdv. (*A. dilutaria* Hein., *osseata* Fab.). Very local. Sherwood Forest, common (*Brameld*). Wellow, 31. vii. 1886 ; Southwell, not uncommon (*Becher*).
- A. subsericeata** Haw. Mansfield, rather scarce: beaten from hazel, 19. vi. 1891 (*Daws*).
- A. aversata** L. Common and widely distributed. Sherwood Forest, common (*Sterland*, *Brameld*). Worksop ; Clumber Park, etc. (*Lady Robinson*). Wellow, type and var. *spoliata* (*Becher*). South Leverton, common (*Thornley*). Mansfield, common (*Daws*). Thorney, with var. *spoliata* ; Wollaton (*Henderson*). Nottingham ; Carlton ; Gotham ; Epperstone ; Langford Moor (*Saunt*). A few at West Bridgford (*Wallis*). Stapleford, common (*Dawson*). Chilwell, plain and banded forms (*Pearson*). Bunny and Widmerpool (*Pike*). Dates recorded are from June 10 to July 24.
- A. bisetata** Hufn. Fairly common in northern half of county: not observed in the Nottingham district. Sherwood Forest,

common (*Brameld*). Worksop (*Lady Robinson*). South Leverton, common (*Thornley*). Mansfield, frequent (*Daws*). Langford Moor (*Saunt*).

A. dimidiata Hufn. Frequent. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Southwell (*Becher*). Mansfield district, fairly distributed (*Daws*). Epperstone; Langford Moor (*Saunt*). West Bridgford, a few (*Wallis*). Chilwell, 19. vii. 1900 (*Pearson*). Stapleford, common (*Dawson*).

A. trigeminata Haw. 'Mansfield, rather scarce': 12. vii. 1891 (*Daws*).

[*A. ornata* Scop. 'Sherwood Forest, occasional' (*Sterland*). Error?]

A. remutaria Hübn. Locally common. Sherwood Forest, common (*Sterland*, *Brameld*). Plentiful in Clumber Park, etc. (*Lady Robinson*). Wellow (*Becher*). Treswell Wood, common amongst *Corylus* (*Thornley*). Thieves Wood and other places about Mansfield (*Daws*). Langford Moor (*Saunt*). May 13—June 20.

A. imitaria Hübn. Apparently scarce. Sherwood Forest, common (*Brameld*). Worksop, 1901 (*Houghton*). Mansfield district, a few in various localities (*Daws*). Nottingham district, a good series secured in the lanes at dusk with the net, July 1883 (*Wright*).

A. fumata Steph. Not observed for many years. Sherwood Forest, occasional (*Sterland*).

ANIA Steph.

A. emarginata L. Sherwood Forest, frequent (*Brameld*). Langford Moor (*Saunt*). Thorney, Aug. 1913 (*L. A. Carr*).

TIMANDRA Dup.

T. amata L. (*T. amataria* L.). Generally distributed but not very common. Sherwood Forest, common (*Sterland*, *Brameld*). Worksop, several in 1900 (*Houghton*). Retford (*Hillman*). Wellow (*Becher*). South Leverton, frequent; Treswell Wood, not uncommon; Marnham (*Thornley*). Mansfield, only occasionally taken (*Daws*). Upton (*Wynne*). Southwell in plenty; Basford; Cotgrave; Widmerpool; scarce (*Henderson*). Stapleford (*Dawson*). West Bridgford (*Wallis*). Chilwell, not uncommon (*Pearson*). Bunny, 15. vi. 1901 (*Carr*). Kingston-upon-Soar, Aug.

1904 (*Thornley*). Nottingham ; Carlton ; Gotham ;
Owthorpe (*Saunt*).

EPHYRA Dup.

E. porata Fab. Very rare ; only one record. The Birklands,
Sherwood Forest (*J. Ray Hardy*).

E. punctaria L. Widely distributed, and sometimes common
in the Forest. Sherwood Forest, occasional (*Sterland*,
Brameld) ; rather common in June 1871 (*Porritt*) ; larvae
in plenty, Aug. 1872 (*Madden*) ; larvae near Edwinstowe,
Aug. 18 to 25, 1890 (*Hall and Batty*). Common in Clum-
ber Park, etc. (*Lady Robinson*). Mansfield, a few some sea-
sons, *e.g.*, 20. v. 1896, 27. viii. 1897 (*Daws*). Thorney
May 1896 (*Leivers*). Langford Moor (*Carr*). Basford ;
Bunny (*Henderson*).

E. linearia Hübn. Sherwood Forest, common (*Brameld*).
Several obtained in Clumber Park and Drinking-pit Lane,
etc., at rest on fences or by beating beech trees, 28. iv. to
22. v. 1893 (*Lady Robinson*). Ollerton (*Becher*). Mansfield,
a few some seasons, as on 27. viii. 1891 (*Daws*). Langford
Moor, 1910 (*Saunt*).

E. annulata Schulz. 'Sherwood Forest, common' (*Brameld*).
If correct, it is strange that no one else has seen it.

[*E. orbicularia* Hb. Sherwood Forest, occasionally (*Sterland*).
No doubt an error].

E. pendularia Clerck. Local and scarce. Sherwood Forest,
common (*Sterland*) ; twice (*Brameld*) ; rather common,
June 1871 (*Porritt*) ; near Edwinstowe, larvae, Aug. 18—
25, 1890 (*Hall and Batty*, *Entom.*, 1890). One in Clumber
Park, 27. vi. 1894 (*Lady Robinson*). Ollerton (*Becher*).
Mansfield, rather scarce, taken on August 16, 1895 (*Daws*).
Thorney (*Henderson*). Langford Moor (*Pike*).

HYDRIOMENIDAE.

STERRHA H.-S.

S. sacraria L. A female attracted to ~~flies~~ ^{flies} through an open
window of a house at Newark at 11 p.m. on August 19th,
1867 (*G. Gascoyne*). An occasional immigrant from South
Europe, of which about thirty specimens were captured in
Britain in 1867, as well as casual specimens before and
since that date.

ORTHOLITHA Hübn.

- O. plumbaria** Fab. Local and not common. Sherwood Forest, common (*Brameld*); taken there by Porritt in June 1871. Mansfield, fairly common (*Daws*). Epperstone, 19. vi. 1910 (*Saunt*). Bunny (*Simmons*).
- O. cervinata** Schiff. Local and uncommon. Sherwood Forest, frequent (*Brameld*). Wellow (*Becher*). Mansfield, rather erratic in its appearance: common one season at Teversall (*Daws*). Langford Moor, 1912 (*Saunt*). West Bridgford, occasionally (*Simmons*). Chilwell, at light, 2. and 6. x. 1894, 24. ix. 1895, 12. ix 1898 (*Pearson*). Stapleford, 1912 (*Dawson*).
- O. limitata** Scop. Common and widely distributed. Sherwood Forest, common (*Brameld*). Shireoaks, common, 28. vii. 1900 (*Houghton*). Boughton (*Becher*). North and South Leverton, common; Kingston-upon-Soar (*Thornley*). Mansfield, common (*Daws*). Stapleford (*Dawson*). Wollaton, common by canal (*Pike*). Basford (*Henderson*). Common on the Foss Road near Cotgrave, Widmerpool, etc.
- O. bipunctaria** Schiff. Rare and local. Sherwood Forest, twice (*Brameld*). Shireoaks; Worksop, 2. viii. 1900 (*Lady Robinson*). Southwell, one specimen in Cathedral yard (*Becher*). Widmerpool (*Simmons*).

ODEZIA Bdv.

- O. atrata** L. (*O. chaerophyllata* L.). Widely distributed and locally abundant. Sherwood Forest (*Brameld*). Shireoaks (*Houghton*). Marnham, common (*Cunningham*). Wellow (*Becher*). Mansfield, one specimen only at Berry Hill, 27. vi. 1894 (*Daws*). Common in meadows at Southwell; also Bulwell and Bestwood (*Henderson*). Wollaton; Gedling; Epperstone (*Saunt*). Very common at Dunkirk, Lenton (*Pike*). Chilwell, common in meadows (*Pearson*). Meadows at Kingston-upon-Soar, 1. vii. 1905, and at Newark, 27. vi. 1908, common (*Thornley*). Abundant in meadows throughout the Trent Vale.

ANAITIS Dup.

- A. plagiata** L. Not common. Sherwood Forest, occasionally (*Brameld*). Clumber Park, 1. x. 1894, not common, 4—19. vii. 1894 (*Lady Robinson*). Rufford (*Becher*). Sutton near Retford, 29. v. 1901 (*Carr*). Retford (*Hill*). Mansfield, not common, 10. viii. 1890 (*Daws*). Eastwood (*Pearson*). Kingston-upon-Soar, July 1911 (*Thornley*).

CHESIAS Tr.

- C. spartiata** Fues. Rare and local. Sherwood Forest, common (*Brameld*). Worksop, 1901 (*Houghton*). Southwell, three specimens (*Becher*). One specimen at Wollaton (*Wallis*).
- C. rufata** Fab. Formerly occurred in Sherwood Forest but not seen in recent time. Sherwood Forest, occasionally (*Sterland*); frequent (*Brameld*).

LOBOPHORA Curt.

- L. carpinata** Bork. Langford Moor, 18. v. 1911 (*Saunt*). A few at West Bridgford (*Wallis*).
- L. halterata** Hufn. Very rare. Langford Moor, 1910 (*Saunt*). One specimen at Ollerton (*L. A. Carr*).
- L. sexalisata** Hübn. Two specimens taken in Sherwood Forest near Ollerton, June 1912 (*L. A. Carr*).

CHEIMATOBIA Steph.

- C. brumata** L. Abundant throughout the county.
- C. boreata** Hübn. Locally common. Common in Clumber Park throughout the late autumn and winter months (*Lady Robinson*). Sherwood Forest, larvae, June 1871 (*Porritt*). Marnham, common (*Cunningham*). Thieves Wood near Mansfield where, in 1896, it was flying in March (*Daws*).

TRIPHOSA Steph.

- T. dubitata** L. Widely distributed and frequent. Sherwood Forest, occasionally (*Brameld*). Worksop; Clumber Park; etc., March 11 to May 2, frequent (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common in out-houses; Marnham (*Thornley*). Mansfield, some seasons in fair numbers (*Daws*). Langford Moor, Newark (*Saunt*). Nottingham district, rather common in April 1883: also occurred in August (*Wright*). Frequent about Nottingham. Chilwell, at light in August and September, uncommon (*Pearson*).

EUCOSMIA Steph.

- E. certata** Hübn. Rare. Sherwood Forest, once (*Sterland*); rare (*Brameld*). South Leverton, several in vicarage garden, 3. vi. 1900 (*Thornley*).

- E. undulata** L. Very rare. Sherwood Forest, twice (*Sterland*); rare (*Brameld*). One specimen at Berry Hill, Mansfield, 17. vi. 1887 (*Daws*).

SCOTOSIA Steph.

- S. vetulata** Schiff. A single record only. Southwell, one netted at dusk (*Becher*).
- S. rhamnata** Schiff. Of only occasional occurrence. Sherwood Forest, occasional (*Sterland*). Marnham (*Cunningham*). Mansfield, a few taken 6. viii. 1890: not seen before or since (*Daws*). Southwell (*Becher*). Nottingham, Aug. 1888 (*Wright*). Chilwell, not common (*Pearson*).

EUSTROMA Hübn.

- E. silaceata** Hübn. Frequent and fairly general. Sherwood Forest, common but local (*Brameld*). Wellow (*Becher*). Marnham (*Cunningham*). Oxtun Bogs; Epperstone; Langford Moor (*Saunt*). Wollaton (*Pike*). Broxtowe (*Simmons*). Chilwell, rare, occurred 17. ix. 1892 (*Pearson*).

LYGRIS Hübn.

- L. prunata** L. Rare and local. Sherwood Forest, rare (*Brameld*). Used to be taken in an old garden at Worksop, but not seen lately (*Lady Robinson*). Mansfield, a few some seasons (*Daws*).
- L. testata** L. Fairly frequent. Sherwood Forest, occasionally (*Sterland*, *Brameld*). Sherwood Forest near Edwinstowe, flying over heather, Aug. 18 to 25, 1890 (*Hall and Batty*). Worksop (*Lady Robinson*). Rufford (*Becher*). Marnham (*Cunningham*). Mansfield, common but local (*Daws*). Langford Moor (*Saunt*). Bulwell Forest, rather scarce (*Henderson*). Broxtowe (*Pike*). Chilwell, on gas lamps in September (*Pearson*).
- L. populata** L. Very local. Sherwood Forest, common in bilberry woods (*Brameld*). Mansfield, fairly plentiful (*Daws*).
- L. associata** Bork. Local and uncommon. Sherwood Forest, rare (*Brameld*). Wellow; Southwell (*Becher*). Mansfield, a few taken most seasons (*Daws*). Stapleford (*Dawson*). West Bridgford; Wollaton (*Wallis*). Wilford (*Saunt*).

CIDARIA Treit.

- C. pyraliata** Hübn. Fairly general and occasionally common. Sherwood Forest, common (*Brameld*). Shireoaks, common

(*Houghton*). Southwell and Wellow (*Becher*). Caddow Wood, North Leverton (*Thornley*). Mansfield, not common (*Daws*). A few at West Bridgford (*Simmons*). Bunny (*Pike*). Plumtree; Clipston; Tollerton (*Saunt*).

C. fulvata Forst. Widely distributed and common in some localities. Sherwood Forest, abundant (*Brameld*). Worksop (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common; North Leverton; Marnham (*Thornley*). Mansfield, common: *testata*, *populata* and *fulvata* all taken on July 10th, 1896 (*Daws*). Wollaton (*Pike*). Chilwell, not common (*Pearson*). Stapleford (*Dawson*). Widmerpool (*Simmons*). Owthorpe (*Saunt*).

C. corylata Thunb. Widely distributed and not uncommon. Sherwood Forest, frequent (*Brameld*); also taken by Porritt. Clumber Park, not uncommon (*Lady Robinson*). Wellow (*Becher*). Treswell Wood near Retford (*Thornley*). Mansfield, plentiful some seasons (*Daws*). Langford Moor (*Saunt*). Bunny.

C. truncata Hufn. Common and generally distributed. Sherwood Forest, common (*Brameld*). South Leverton, common in spring and autumn (*Thornley*). Mansfield, common, May and September (*Daws*). Oxtun; Epperstone; Langford Moor; Trowell (*Saunt*). Stapleford, common (*Dawson*). West Bridgford; Beeston; not uncommon (*Wallis*). Chilwell, fairly common at light (*Pearson*).

C. immanata Haw. Local. Sherwood Forest, common (*Brameld*). Worksop, occasional (*Lady Robinson*). Wellow (*Becher*). Mansfield, common (*Daws*). Perhaps not always distinguished from the last species.

C. siterata Hufn. Sherwood Forest, occasional (*Sterland*).

C. miata L. Sherwood Forest, frequent (*Brameld*). Wellow (*Becher*). South Leverton, common in the vicarage in the spring, coming to light about the latter half of April (*Thornley*). Mansfield, not common (*Daws*). Chilwell, on gas lamps in September (*Pearson*).

THERA Steph.

T. variata Schiff. In pine-woods, very local. Sherwood Forest, common (*Brameld*). Common in Clumber Park, Drinking-pit Lane, etc., amongst Scots pines, and at rest on palings. The larvae may also be obtained plentifully by beating Scots pines (*Lady Robinson*). Ollerton (*Becher, Carr*). A few at Berry Hill, Mansfield (*Daws*). Common at Langford Moor near Newark in June (*Pike, Saunt*).

T. firmata Hübn. Local and rare. Sherwood Forest, rare (*Brameld*). Larvae at Ollerton, June 1912 (*L. A. Carr*). A few at Berry Hill, Mansfield, 12. vii. 1896 (*Daws*).

[*T. juniperata* L. Sherwood Forest, once or twice (*Sterland*). Doubtful].

LAMPROPTERYX Steph.

L. suffumata Hübn. Locally common. Sherwood Forest, common (*Brameld*). Worksop district, frequent (*Lady Robinson*). South Leverton, a few (*Thornley*). Mansfield, common (*Daws*). Oxtou Bogs (*Saunt*). Broxtowe Wood, common (*Henderson*). Wollaton (*Pike*). April 12 to May 20.

COREMIA Dup.

C. quadrifasciaria Clerk. Rare. Sherwood Forest, rare (*Brameld*). Langford Moor, 5. vi. 1910 (*Saunt*).

C. unidentaria Haw. Moderately common and general. Sherwood Forest, common (*Brameld*); also taken there by Porritt in June 1871 and August 13—17, 1894. Worksop, Clumber Park, etc., occasional, *e.g.*, 22. iv. and 21. vii. 1893; 27. viii. 1894 (*Lady Robinson*). Mansfield, common some seasons, *e.g.*, 12. v. 1894 and 16. viii. 1895 (*Daws*). Stapleford (*Dawson*). Chilwell, 4. ix. 1896 (*Pearson*). Nottingham; Wollaton; Oxtou; Epperstone; Langford Moor; Owthorpe (*Saunt*).

C. ferrugata Clerck. Widely distributed and often common. Sherwood Forest, common (*Brameld*). Steetley Wood near Worksop, 24. vii. 1893 (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common; North Leverton; Marnham (*Thornley*). Mansfield, common some seasons, *e.g.*, 27. iv. and 15. viii. 1897 (*Daws*). Stapleford (*Dawson*). Oxtou; Epperstone; Langford Moor (*Saunt*). Nottingham district, common (*Wright*). West Bridgford, common (*Simmons*).

C. designata Rott. Local and scarce. Occurs sparingly in Wellow Park almost every year (*Becher*). Beauvale Woods, 25. v. 1901 (*Carr*). Epperstone; Langford Moor (*Saunt*).

AMOEBE Hübn.

A. viridaria Fab. Frequent and fairly general. Sherwood Forest, common (*Brameld*). Clumber Park, etc., June 23 to July 3, not very common (*Lady Robinson*). Wellow;

Southwell (*Becher*). Treswell Wood, 16. viii. 1901 (*Thornley*). Thieves Wood near Mansfield, fairly common, June 10 to end of July (*Daws*). Woods about Newstead Park, 4. vi. 1883, 'in good numbers' (*Wright*). Langford Moor (*Saunt, Dawson*). Bunny (*Pike*).

MALENYDRIS Hübn.

M. multistrigaria Haw. Local. Common in Clumber Park, March 2—17, 1894 (*Lady Robinson*). Mansfield, on tree-trunks close to the ground, 27. iii., 4. iv., 1894 (*Daws*). Oxtou, 1909—11 (*Saunt*). Bulwell Forest, several, 21. iv. 1901.

M. didymata L. Common and generally distributed.

OPORABIA Steph.

O. dilutata Bork. Common and generally distributed.

O. autumnata Bork. Rare. A few at Thieves Wood near Mansfield, October 2 to end of month (*Daws*).

O. filigrammaria H.-S. Rare. Sherwood Forest, frequent (*Sterland*). A few at Thieves Wood near Mansfield, 20. ix. 1894 (*Daws*). Chilwell, one specimen in 1893 (*Pearson*).

VENUSIA Curt.

V. cambrica Curt. Only a single record. Worksop (*Hardy*).

[*Entephria flavicinctata* Hübn. 'Sherwood Forest, several specimens' (*Sterland*). A very doubtful record].

XANTHORHOË Hübn.

X. montanata Schiff. Common throughout the county.

X. fluctuata L. Everywhere abundant.

X. galiata Hübn. Very rare. In woods adjacent to Newstead Park near Mansfield, June 4, 1883 (*Wright*).

X. rivata Hübn. Very local. Sherwood Forest, rare (*Brameld*). A few at Thieves Wood near Mansfield, 12. vii. 1896 (*Daws*). Woods adjacent to Newstead Park, 4. vi. 1883 (*Wright*). West Bridgford, common (*Simmons*). Common in woods, Broxtowe and Widmerpool (*Henderson*). Stapleford (*Dawson*).

X. sociata Bork. Common throughout the county.

- X. tristata** L. Rare. Mansfield, rather scarce : beaten from hedges in several places (*Daws*).

EULYPE Hübn.

- E. hastata** L. Sherwood Forest, frequent (*Sterland*). Near the Major Oak in Sherwood Forest, June 1912 (*L. A. Carr*).

MESOLEUCA Hübn.

- M. albicillata** L. Widely distributed but not often common. Sherwood Forest, common (*Brameld*). Coach-road plantation near Worksop, 22. v. 1893 ; garden at Worksop, 9. vii. 1900 (*Lady Robinson*). Wellow (*Becher*). Thorney (*Henderson, Leivers*). Mansfield district, odd specimens in several places (*Daws*). Woods adjacent to Newstead Park, just coming out, 4. vi. 1883 (*Wright*). Epperstone Park, 1909—13 ; Langford Moor, 1909—12 (*Saunt*). Broxtowe Wood ; Wollaton, common ; Widmerpool (*Henderson*).
- M. ocellata** L. Widely distributed and occasionally common. Sherwood Forest, common (*Brameld*) ; also taken by Porritt, June 1871. Clumber Park, fairly common, May 21st to June 16th (*Lady Robinson*). Ollerton (*Becher*). Common at Thieves Wood near Mansfield, 17—20. vi. 1891 (*Daws*). South Leverton, 23. vii. 1901 (*Thornley*). Epperstone ; Oxton ; Langford Moor ; frequent in each locality (*Saunt*). Trowell (*Dawson*). Bulwell (*Pearson*). West Bridgford (*Wallis*). Bunny (*Pike*).
- M. bicolorata** Hufn. Rare. Sherwood Forest, occasional (*Sterland*) ; twice (*Brameld*). Boughton (*Becher*). Four specimens in my garden at Mansfield, July 21—23, 1893 (*Daws*). Wollaton (*Pike*).

PERIZOMA Hübn.

- P. affinitata** Steph. Local and uncommon. Mansfield, a few some seasons, *e.g.*, 10—12. vi. 1896 (*Daws*). Calverton ; Oxton ; Epperstone (*Saunt*). Old Basford, 10 and 16. vi. 1898 ; Broxtowe ; Wollaton ; etc. (*Henderson*). Very common at Wollaton in 1897 (*Pike*). Trowell, 1913 (*Dawson*).
- P. alchemillata** L. Local and usually scarce. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*). Southwell (*Becher*). Mansfield, more plentiful than the last species : June 12 to end of month, 1896 (*Daws*). Oxton ; Calverton (*Saunt*).

P. flavofasciata Thnb. (*P. decolorata* Hüb.). Fairly distributed and sometimes rather common. Sherwood Forest, common (*Brameld*); also taken by Porritt, June 1871. Park House gardens, Worksop, 30. v. and 6. vii. 1893 (*Lady Robinson*). Wellow (*Becher*). Mansfield, occasionally in my garden (*Daws*). Stapleford; Oxtun; Epperstone (*Saunt*). Broxtowe Wood near Nottingham, common (*Henderson*). Barton, a few bred from campion, June 1900 (*Pearson*). Wollaton (*Pike*). Trowell (*Dawson*).

P. albulata Schiff. Widely distributed, and common in the south of the county. Sherwood Forest, rare (*Brameld*). Worksop; Shireoaks (*Houghton*). Osberton (*Lady Robinson*). Wellow; Southwell (*Becher*). Claborough; Rampton (*Thornley*). Langwith; Mansfield (*Daws*). Common at Newstead, 4. vi. 1883 (*Wright*). Wollaton; Oxtun; Epperstone (*Saunt*). Near Bunny Wood in plenty (*Henderson*). Cotgrave; Normanton-on-the-Wolds; common (*Wallis*).

CAMPTOGRAMMA Steph.

C. bilineata L. Very common and universally distributed.

HYDRIOMENA Hüb.

H. furcata Prout. (*H. sordidata* Fab.). Rather common and general. Sherwood Forest, common (*Brameld*). Wellow; Southwell (*Becher*). South Leverton, not uncommon; Treswell; Marnham (*Thornley*). Mansfield, very common: some good varieties bred from larvae found in sallow catkins (*Daws*). Langford Moor; Epperstone; Bleasby (*Saunt*). Stapleford (*Dawson*). Wollaton (*Pike*). Chilwell, fairly common and variable (*Pearson*). Larvae common in South Notts. (*Wallis*).

H. impluviata Hüb. (*H. trifasciata* Bork.). Rare and very local. Two specimens in a scotch-fir plantation near Newstead, 4. vi. 1883 (*Wright*). Epperstone, 1909—11 (*Saunt*). A few at Wollaton in May (*Pike*).

H. ruberata Frey. Very rare. Bunny (*Simmons*).

ANTICLEA Steph.

A. badiata Hüb. Fairly common and general. Sherwood Forest, common (*Brameld*). Worksop, frequent, 12. iv.—5. v. (*Lady Robinson*). South Leverton, sporadically, 31. iii.—5. v. (*Thornley*). Southwell (*Becher*). Mansfield, fairly common (*Daws*). Stapleford (*Dawson*). Nottingham

district (Broxtowe, West Bridgford, Wollaton, Chilwell, etc.), sometimes common. Burton Joyce (*Saunt*).

A. rubidata Fab. Three specimens taken at Edwinstowe, 4. vi. 1896 (*Hardy*). The only record.

A. nigrofasciaria Goeze. Widely distributed and moderately common. Sherwood Forest, common (*Brameld*). Wellow; Southwell (*Becher*). North and South Leverton and Treswell Wood, not uncommon (*Thornley*). Mansfield, a few bred from larvae found on wild rose (*Daws*). Epperstone Park (*Carr*). Nottingham, in fair numbers, end of April 1883 (*Wright*). Bunny (*Pike*).

EUCHOECA Hübn.

E. obliterata Hufn. Rare. Oxtou Bogs, 1908-9 (*Saunt*).

ASTHENA Hübn.

A. candidata Schiff. Fairly common and general. Sherwood Forest, common (*Sterland*, *Brameld*). Shireoaks; Scratta Wood near Worksop (*Lady Robinson*). Wellow (*Becher*). Treswell Wood, common, 6. vi. 1900; Marnham (*Thornley*). Plentiful at Thieves Wood and Harlow Wood near Mansfield; also at Langwith: 16. v.—27. vi. 1893 (*Daws*). Oxtou Bogs; Epperstone (*Saunt*). Broxtowe; Strelley; Wollaton (*Henderson*).

A. luteata Schiff. Local and not common. Sherwood Forest, common (*Brameld*). Worksop; Clumber Park; etc., not very common (*Lady Robinson*). Wellow (*Becher*). Mansfield district, some seasons in fair numbers (*Daws*). Trowell; Langford Moor; Epperstone (*Saunt*). Broxtowe Wood (*Henderson*).

A. sylvata Hübn. Very rare. Epperstone Park, 1909 (*Saunt*).

A. blomeri Curt. In one locality only. Epperstone Park, 1909—12 (*Saunt*).

EUPITHECIA Curt.

E. oblongata Thunb. (*E. centaureata* Fab.). Widely distributed and frequent. Sherwood Forest, common (*Brameld*); larvae on ragwort flowers near Edwinstowe (*Hall and Batty*). Clumber Park, etc., fairly common, 26. vi. 1893 (*Lady Robinson*). South Leverton, one example on vicarage window, 9. ix. 1898; larvae at Kingston-upon-Soar, 1911 (*Thornley*). Calverton, 19. vii. 1910 (*Saunt*). West Bridgford; Wollaton (*Wallis*). Bunny (*Pike*).

- E. pulchellata** Steph. Local and scarce. Sherwood Forest, rare (*Brameld*); also taken by Porritt, June 1871. Worksop (*Lady Robinson*). A few at Thieves Wood near Mansfield, 27. vi. 1896 (*Daws*). Calverton and Oxtun, frequent.
- E. linariata** Fab. Rare, and found in one locality only. Thieves Wood near Mansfield, only a few in several years (*Daws*).
- E. indigata** Hübn. Locally common in pine woods in the Forest. Sherwood Forest, common (*Brameld*). Clumber Park, etc., common, 8. v.—2. vi. 1893 (*Lady Robinson*). Budby (*Becher*). Mansfield, not common (*Daws*).
- E. venosata** Fab. Rare. Sherwood Forest, frequent (*Sterland*); rare (*Brameld*). Worksop (*Houghton*). One or two at Thieves Wood, 27. v. 1890 and 17. v. 1896 (*Daws*). One at Broxtowe in 1898 (*Henderson*).
- E. assimilata** Gn. Very local. Park House gardens, Worksop; Clumber Park; 8. v.—20. vi. 1893 and 30. iv.—23. vi. 1894 (*Lady Robinson*).
- E. absinthiata** Clerck. Sherwood Forest, rare. Twice taken (*Brameld*). Larvæ in ragwort flowers (with *E. oblongata*) near Edwinstowe (*Hall and Batty*). Wellow (*Becher*).
- E. goossensiata** Mabille (*E. minutata* Gn.). Rare and very local. Mansfield, a few some seasons (*Daws*).
- E. albiguttata** Haw. Very local and rare. Worksop, 1901 (*Houghton*). Two specimens in my garden at Mansfield, 15. vi. 1896 (*Daws*).
- E. vulgata** Haw. Common and universally distributed.
- E. lariciata** Frey. Very local, but common where it occurs. Hundreds seen on June 7, 1890, in a fir plantation near Worksop (*A. E. Hall*). Fairly common in Clumber Park, 8—18. v. and 3. vii. 1893; 6—12. vi. 1894 (*Lady Robinson*). Langford Moor near Newark, 18. iv. 1911 (*Saunt*).
- E. castigata** Hübn. Very local, or perhaps overlooked. Sherwood Forest, common (*Brameld*); also taken by Porritt, June 1871. Mansfield, fairly abundant, e.g., 16. vi. 1896 (*Daws*).
- E. subnotata** Hübn. Rare. Sherwood Forest, occasionally (*Brameld*). One at West Bridgford (*Wallis*). Chilwell, 20. vii. 1901 (*Pearson*).
- E. succenturiata** L. Very rare. Sherwood Forest, twice taken (*Brameld*). Southwell (*Becher*).

- E. subfulvata** Haw. Scarce. Worksop, 1901 (*Houghton*). Mansfield, not common (*Daws*). Nottingham; Epperstone (*Saunt*). Lenton (*Pike*).
- E. scabiosata** Bork. Rare. Mansfield, a few some seasons, *e.g.*, 20. v. 1890; 6. vi. 1891 (*Daws*).
- P. pygmaeata** Hübn. Rare. Taken in same locality and on same dates as the last species (*Daws*).
- E. innotata** Hufn. Rare. Thieves Wood near Mansfield, at rest on tree trunks, not common, 20. vi. 1892 (*Daws*).
- E. fraxinata** Crewe. Rare and local. Mansfield, rather scarce, 20. vii. 1889 (*Daws*). Lowdham, 11. vi. 1901 (*Carr*).
- E. nanata** Hübn. Local and scarce. Rufford (*Becher*). 'Not infrequent on the common just by Edwinstowe' (*Hardy*). Mansfield, a few most seasons, *e.g.*, May 10, 16, 20, 1896 (*Daws*).
- E. abbreviata** Steph. Locally common. Park House gardens, Worksop; Clumber Park; etc., common, 8.—22. iv. 1893; 31. iii.—17. iv., 17. v. 1894 (*Lady Robinson*). In fair numbers at Thieves Wood near Mansfield, 20. iii. and 4. iv. 1892 (*Daws*). Langford Moor near Newark, 18. iv. 1911 (*Saunt*).
- E. dodoneata** Gn. Very rare. A single ♀ on an oak tree in Sherwood Forest, 1896 (*Hardy*).
- E. exigua** Hübn. Rather common locally. Sherwood Forest, common (*Brameld*). Sherwood Forest, June 1871 (*Porritt*). Clumber Park, frequent, 28. iv., 2. and 18. v. 1893 (*Lady Robinson*). 'I often take it in my garden at Mansfield, *e.g.*, 10. vi. to end of month, 1894 (*Daws*). Stapleford, 1913 (*Dawson*).

GYMNOSCELIS Mabille.

- G. pumilata** Hübn. Mansfield, not common, 6. viii. 1893 (*Daws*). Sherwood Forest near Ollerton, June 1912 (*L. A. Carr*).

CHLOROCLYSTIS Hübn.

- C. coronata** Hübn. Very local and scarce. Clumber Park, etc., frequent, 17.—30. iv. 1894 (*Lady Robinson*). Mansfield, only three or four taken, 10. viii. 1895 (*Daws*). Stapleford, 1914 (*Dawson*).
- C. rectangulata** L. Fairly common and general. Sherwood Forest, common (*Sterland*, *Brameld*). Park House gardens,

etc., Worksop, frequent, 10—12. vi. 1893 (*Lady Robinson*). South Leverton, common (*Thornley*). Mansfield, fairly common on apple trees, June 6 to end of month, 1897 (*Daws*). Nottingham, rather common in my garden, 29 and 30. vi. 1901 (*Carr*). Very common at Lenton (*Pike*).

PELURGA Hübn.

P. comitata L. Frequent. Sherwood Forest (*Brameld*). Worksop, 1902 (*Lady Robinson*). Frequently taken in my garden at Mansfield: very common in 1894, July 4—15 (*Daws*). Nottingham district (*Wright*). Sneinton Dale, Nottingham (*Saunt*). West Bridgford, not uncommon (*Wallis*). Chilwell, 30. vii. 1894 (*Pearson*). Stapleford (*Dawson*).

PHIBALAPTERYX Steph.

P. vitalbata Hübn. Very rare. A few in Rosemary Lane, Mansfield, Aug. 17, 1893 (*Daws*).

P. vittata Bork. Very rare, and not taken for many years. Sherwood Forest, twice (*Sterland*); local (*Brameld*).

BOARMIINAE.

ABRAXAS Leach.

A. sylvata Scop. Widely distributed but local and uncertain, though often very abundant. Park House gardens, Worksop; Clumber Park; Drinking-pit lane, etc.: very abundant some years, in others not seen at all (*Lady Robinson*). Wellow (*Becher*). South Leverton; Treswell and Gringley Woods; Kimberley (*Thornley*). Occurs some years in plenty at Cauldwell Wood near Mansfield (*Daws*). Mansfield; Newstead; Barton; extremely abundant some seasons (*Pearson*). Trowell; Oxton Bogs; Epperstone Park (*Saunt*). Very common in and around the woods at Bestwood Park: I once (in 1899) counted 42 specimens on the grass under an elm tree; also in abundance at Broxtowe Wood (*Henderson*). Kinoulton (*Wallis*). Bunny, sometimes common.

A. grossulariata L. Common throughout the county.

LOMASPILIS Hübn.

L. marginata L. Widely distributed and often common. Sherwood Forest, common (*Sterland*, *Brameld*). Clumber

Park and Park House gardens, Worksop, occasional (*Lady Robinson*). Wellow (*Becher*). Treswell Wood, common; Rampton; East Park Wood, Laxton (*Thornley*). Thorney, in plenty (*Henderson*). Mansfield, fairly plentiful: taken from May 6 right through the summer (*Daws*). Woods adjacent to Newstead Park (*Wright*). Trowell; Oxtan Bogs (*Saunt*). Epperstone Park, common (*Carr*). Wollaton, very common, with some good varieties (*Pike*). Chilwell, not uncommon (*Pearson*). Cotgrave (*Wallis*).

LIGDIA Guen.

L. adustata Schiff. Local and uncommon. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Wellow (*Becher*). Odd specimens at Broxtowe Wood (*Henderson*, *Pike*). One at West Bridgford (*Wallis*).

[*Aleucis pictaria* Curt. Sherwood Forest, occasional (*Sterland*). Presumably an error of identification].

BAPTA Steph.

B. temerata Hübn. Local and usually scarce. Sherwood Forest, occasionally (*Brameld*). Fairly common in Clumber Park, etc. (*Lady Robinson*). A few specimens at Thorney in 1896-7 (*Henderson*). Bunny, three specimens taken on July 7, 1898.

CABERA Tr.

C. pusaria L. Common and generally distributed. Sherwood Forest, common (*Sterland*, *Brameld*). Clumber Park, etc., fairly common (*Lady Robinson*). Ollerton and Wellow (*Becher*). Treswell Wood, common; South Leverton; Marnham (*Thornley*). Common at Thieves Wood near Mansfield (*Daws*). Langford Moor; Oxtan; Epperstone, common; Trowell (*Saunt*). Beauvale Woods (*Carr*). Broxtowe; Wollaton (*Henderson*). West Bridgford, common (*Simmons*). The form or var. *rotundaria* Haw. is recorded from the Birklands, Sherwood Forest, by J. R. Hardy.

C. exanthemata Scop. Fairly common and general. Sherwood Forest, common (*Brameld*). Clumber Park, etc., not so common as *C. pusaria* (*Lady Robinson*). Wellow (*Becher*). Treswell Wood, common (*Thornley*). Fairly common at Thieves Wood (*Daws*). Epperstone and Oxtan (*Saunt*). Very common at Broxtowe (*Pike*). Chilwell (*Pearson*). West Bridgford; Widmerpool (*Wallis*).

NUMERIA Dup.

- N. pulveraria** L. Very local and not often taken. Wellow Park, several specimens on hawthorn bloom, 1900 (*Becher*). Thorney, in plenty (*Henderson*). Mansfield, scarce (*Daws*).

ELLOPIA Tr.

- E. prosapiaria** L. Very local and not common. Sherwood Forest, rare (*Brameld*). Fairly frequent among Scotch firs in Clumber Park: the specimens are small and dark (*Lady Robinson*). Mansfield, rather scarce (*Daws*). Four specimens at Langford Moor, 1899 (*Pike*); in same locality, 1910-11 (*Saunt*).

METROCAMPA Latr.

- M. margaritaria** L. Widely distributed and fairly common. Sherwood Forest, common (*Brameld*). Clumber Park, etc., fairly common (*Lady Robinson*). Ollerton; Southwell (*Becher*). South Leverton; Marnham (*Thornley*). Mansfield district, frequent (*Daws*). Moderately common: Thorney; Broxtowe Wood; Bunny; Widmerpool (*Henderson*). Oxton Bogs; Epperstone Park; Langford Moor (*Saunt*). Wollaton, common (*Pike*). Stapleford (*Dawson*). Chilwell, not common (*Pearson*). A few near Kinoulton (*Wallis*).

ENNOMOS Tr.

- E. quercinaria** Hufn. Very scarce and local. Sherwood Forest, twice (*Brameld*). Sherwood Forest, near Edwinstowe, in some numbers, Aug. 1891 (*Leivers*). Worksop, occasionally (*Lady Robinson*). Ollerton (*Becher*). Mansfield, rare (*Daws*). Treswell Wood, one example, 4. ix. 1900; Crown End Wood, West Leake, 12. viii. 1904 (*Thornley*).
- E.alniaria** L. Frequent and fairly general. Worksop (*Houghton*). South Leverton; Marnham (*Thornley*). Southwell; Wellow (*Becher*). Langford Moor; Beeston (*Saunt*). Bagthorpe, Nottingham (*Leivers*). West Bridgford, not common (*Wallis*). Chilwell, fairly common on gas lamps (*Pearson*). Derby Road near Beeston, on gas lamps (*Pike*).
- E. fuscantaria** Haw. Widely distributed but not common. Worksop (*Houghton*). Wellow and Southwell (*Becher*). South Leverton, rather freely at light (*Thornley*). Chilwell, not common (*Pearson*). One bred from larva found at Lenton (*Pike*). One at Cotgrave (*Simmons*).

- E. erosaria** Bork. Rare and local. Sherwood Forest, twice (*Brameld*). Sherwood Forest, 1857 (*Wm. Rodgers* in *Ent. Wkly. Int.*, vol. ii.). Worksop, 1901 (*Houghton*). Chilwell, rare, 3. ix. 1896, at light (*Pearson*).

SELENIA Hübn.

- S. bilunaria** Esp. Widely distributed and often common. Sherwood Forest, common (*Brameld*). Shireoaks (*Houghton*). Wellow and Southwell, both spring and summer (var. *juliaria*) broods (*Becher*). South Leverton, not uncommon in spring; Marnham (*Thornley*). Mansfield district, common, March 20 to end of April; the summer form *juliaria* also frequent (*Daws*). Upton (*Wynne*). Langford Moor, 14. viii. 1910 (*Saunt*). Nottingham district, in fair numbers towards end of April; second brood common in Nottingham gardens in July, 1883 (*Wright*). West Bridgford, not common (*Simmons, Wallis*). Chilwell, fairly common at light (*Pearson*). Stapleford (*Dawson*).
- S. lunaria** Schiff. Sherwood Forest only, very rare. Recorded as 'occasional' by Sterland. One taken at rest on a fence in Drinking-pit Lane near Worksop, 18. v. 1893 (*Lady Robinson*).

HYGROCHROA Hübn. (*Pericallia* Steph.).

- H. syringaria** L. Fairly well distributed but always scarce. Sherwood Forest, rare (*Brameld*). Worksop (*Lady Robinson*). South Leverton, one specimen in vicarage garden, 16. vii. 1899 (*Thornley*). Southwell (*Becher*). Mansfield, rather scarce (*Daws*). Langford Moor, 14. vi. 1911 (*Saunt*). Occasionally in Nottingham gardens, July 1883 (*Wright*).

GONODONTIS Hübn.

- G. bidentata** Clerck. Common and generally distributed.

HIMERA Dup.

- H. pennaria** L. Frequent but local. Sherwood Forest, occasional (*Sterland*); larvae not uncommon, June 1871 (*Porritt*); larvae also taken there by D. H. Pearson, from which some dark varieties were bred. Worksop district, occasional (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, 14. x. 1896 and 17. x. 1897 (*Thornley*). Frequent in Thieves Wood near Mansfield, 6. x. to 15. xi. 1896 (*Daws*). Chilwell, not uncommon at light (*Pearson*). Stapleford (*Dawson*). Lenton (*Simmons*).

CROCALLIS Tr.

- C. elinguaris** L. Generally distributed and moderately common. Sherwood Forest, common (*Brameld*). Worksop; Clumber Park; etc., frequent (*Lady Robinson*). Ollerton; Southwell (*Becher*). South Leverton, not uncommon; Marnham (*Thornley*). Mansfield district, in fair numbers (*Daws*). Nottingham district, frequent and sometimes common (*Carr*). Chilwell, not common (*Pearson*). Wollaton; Edwalton; Plumtree; Oxtun Bogs (*Saunt*). Stapleford (*Dawson*).

ANGERONA Dup.

- A. prunaria** L. Rare and very local. Sherwood Forest, occasional (*Sterland*). A few in woods at Thorney in 1896 (*Henderson*).

OURAPTERYX Leach.

- O. sambucaria** L. Moderately common throughout the county.

EURYMENE Dup.

- E. dolabraria** L. Rare but widely distributed. Sherwood Forest, near Edwinstowe, etc., taken at intervals by many collectors. Drinking-pit Lane near Worksop; Clumber Park (*Lady Robinson*). Ollerton (*Becher*). Mansfield, 20. vi. 1890, one specimen (*Daws*). Langford Moor (*Pike, Saunt*). One by canal side near Cotgrave (*Henderson*).

OPISTHOGRAPTIS Hübn. (*Rumia* Dup.).

- O. luteolata** L. (*O. crataegata* L.). Universally distributed and very common.

EPIONE Dup.

- E. apiciaria** Schiff. Widely distributed but occurs very sparingly. Sherwood Forest, frequent (*Brameld*). Three specimens taken, 7. viii. 1882, in an old garden at Worksop; not seen since (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, rarely at light in vicarage; Marnham (*Thornley*). Mansfield, only two or three taken (*Daws*). Langford Moor; Flawforth near Plumtree (*Saunt*). Nottingham (*Wright*). West Bridgford, rare (*Simmons, Wallis*). Chilwell, not common (*Pearson*). Stapleford (*Dawson*).

VENILIA Dup.

V. macularia L. Very rare. Seen once or twice near True-man's Lodge, Clumber Park (*Lady Robinson*). Marnham (*Cunningham*).

SEMIOTHISA Hübn. (*Macaria* Curt.).

S. notata L. Very rare. 'Near Worksof' (*Hardy*).

S. liturata Clerck. Widely distributed but by no means common. Sherwood Forest, occasionally (*Sterland*, *Brameld*). Clumber Park, etc., frequent (*Lady Robinson*). Wellow (*Becher*). Occasionally at Berry Hill, Mansfield (*Daws*). Langford Moor (*Pike*, *Saunt*). West Bridgford, a few (*Simmons*). Chilwell, at sugar, 12. ix. 1898 (*Pearson*). Owthorpe (*Saunt*).

HYBERNIA Latr.

H. rupicaprararia Hübn. Common and generally distributed.

H. leucophaearia Schiff. 'Abundant in Clumber Park in great variety, some of the dark examples being very beautiful. In 1893 the first were seen on January 30th, and they lasted throughout February to March 13th. In 1894 they began on January 17th, when 18 were taken, and they increased in numbers until the middle of February, when many dark varieties were noticed, the earlier specimens being chiefly light in colour. On March 10th one or two were still to be seen, but on the 13th only two were found. The females—together with those of *H. aurantiaria*, *H. marginaria* and *H. defoliaria*—are frequently found on palings and tree trunks, and the larvae of all are abundant but often ichneumoned' (*Lady Robinson*). Wellow (*Becher*). South Leverton; Treswell Wood, not uncommon (*Thornley*). Thieves and Harlow Woods, with some fine varieties (*Daws*). Oxtun and Epperstone (*Saunt*). Nottingham, scarce (*Carr*). Wollaton, not very plentiful (*Pearson*). Bramcote (*Leivers*).

H. aurantiaria Esp. Widely distributed but not often common. Sherwood Forest, occasionally (*Brameld*). Common in Clumber Park (*Lady Robinson*). Wellow (*Becher*). Marnham (*Cunningham*): Thieves Wood near Mansfield, not common (*Daws*). Epperstone (*Saunt*). Beeston (*Henderson*). Wollaton (*Leivers*). Widmerpool (*Simmons*).

H. marginaria Bork. Common everywhere.

H. defoliaria Clerck. Common throughout the county.

ANISOPTERYX Steph.

A. aescularia Schiff. Widely distributed and common.

PHIGALIA Dup.

P. pedaria Fab. Distributed over the county but apparently not very common. A melanic specimen without markings was taken by Mr. Pearson at Chilwell.

APOCHEIMA Hübn.

A. hispidaria Fab. Local and usually scarce. Sherwood Forest, frequent (*Sterland*); larvae from oak, June 1871 (*Porritt*). Worksop, rather scarce (*Lady Robinson*). Ollerton, one specimen (*Becher*). South Leverton, a ♂ at light, 13. iii. 1901 (*Thornley*). Thieves Wood, where I took a good series of both sexes, 2. iii. 1897 (*Daws*).

LYCIA Hübn.

L. hirtaria Clerck. Sherwood Forest, 'frequent' (*Sterland*). This record is perhaps open to suspicion.

AMPHIDASIS Tr.

A. strataria Hufn. Rare and local. Sherwood Forest, frequent (*Sterland*). One or two specimens taken in Clumber Park, 16. iv. 1895 (*Lady Robinson*). Southwell and Wellow (*Becher*). Thieves Wood near Mansfield (*Daws*).

A. betularia L. Generally distributed and not uncommon as the black variety *doubledayaria* Mill.: the type, however, is decidedly scarce; intermediate forms occasionally occur. Common in Sherwood Forest in the larval state. Worksop, not uncommon, the black var. seen more frequently than the type: one beautiful intermediate variety taken from a doorstep in Worksop, 17. vi. 1893 (*Lady Robinson*). Ollerton, the black var. (*Becher*). South Leverton, common, but nearly always the var. *doubledayaria*: the type seems now to be very uncommon; one bred 9. v. 1899 was black 'peppered' with white; Marnham, type and black var.; Dunham-on-Trent; Grove (*Thornley*). Newark, 1886, a pair of the var. *doubledayaria* taken in copulâ, from which a series of the variety was bred; another couple also taken near Newark in 1887; the variety has occurred at various times in the neighbourhood, but the type only once (*J. H. Tomlinson* in *Entom.*, 1888). Newark, var. *doubledayaria*, 1911 (*Saunt*). Southwell and Rolleston: the var. *double-*

dayaria at Rolleston, 1894 (*Henderson*). Mansfield district, frequent, with var. *doubledayaria* (*Daws*). Nottingham and West Bridgford, the var. only (*Carr*). Trowell (*Saunt*). Chilwell, not rare, the var. *doubledayaria* as common as the type (*Pearson*). East Leake; Kingston-upon-Soar (*Thornley*). The imago has been taken from May 11 to July 18.

HEMEROPHILA Steph.

H. abruptaria Thunb. Occurs sparingly in many localities. Sherwood Forest, frequent (*Sterland*, *Brameld*). Worksop, gardens at Park House, etc., 20. iv. 1893, 15. v. 1894, etc. (*Lady Robinson*). South Leverton, several specimens at various times on doors and in outhouses in vicarage garden (*Thornley*). Mansfield (*Daws*). Nottingham, common, May 1883 (*Wright*). Common at Lenton (*Leivers*). Sneinton Dale, Nottingham; Lambley (*Saunt*). Chilwell (*Pearson*).

BOARMIA Tr.

B. gemmaria Brahm. (*B. rhomboidaria* Hübn.). Fairly common and generally distributed. Sherwood Forest, frequent (*Brameld*). Park House gardens, etc., Worksop, fairly common (*Lady Robinson*). Wellow; Southwell (*Becher*). South Leverton, common in outhouses about end of July; Marnham (*Thornley*). Mansfield, fairly common (*Daws*). Common in gardens at Nottingham, Lenton, West Bridgford, etc. (*Carr*). Sneinton Dale; Gamston; Calverton (*Saunt*). Stapleford (*Dawson*).

[*B. abietaria* Hübn. 'Sherwood Forest, taken several times' (*Sterland*). Doubtless an error of identification].

B. repandata L. Frequent and widely distributed. Sherwood Forest, frequent (*Brameld*). Park House gardens, Worksop, 3. vii. 1893 (*Lady Robinson*). Edwinstowe (*Becher*). Mansfield district, generally distributed (*Daws*). Epperstone; Langford Moor (*Saunt*). Thorney; Bunny; scarce (*Henderson*). West Bridgford, occasionally (*Simmons*). Chilwell, common in outhouses, etc. (*Pearson*). Trowell (*Dawson*). Dates of capture—June 20, July 3—25, Aug. 1, Aug. 27.

B. roboraria Schiff. Very rare. Sherwood Forest, once (*Sterland*). A few at Thieves Wood near Mansfield, *e.g.*, 10. vii. 1889 (*Daws*).

CLEORA Curt.

C. lichenaria Hufn. Only one record, which needs confirmation. Sherwood Forest, common (*Sterland*).

TEPHROSIA Bdv.

[*T. biundularia* and *T. crepuscularia*. The moths usually described under these names are probably only local races of the same species, as they are connected by intermediate forms and pair freely in captivity. The local distribution of the two races is here given under the names by which they were originally recorded, and it is significant that in only one instance are both forms recorded by the same observer].

T. biundularia [of Borkhausen is more correctly known as *T. bistortata* Goeze]. Sherwood Forest, June 1871, rather common at rest on tree trunks (*Porritt*). Common on fences and tree trunks in Clumber Park, in great variety, some specimens being almost black: April 17 to June 11, 1894 (*Lady Robinson*). At Clipstone and Thieves Wood near Mansfield, with varieties, May 20, June 6, 1894 (*Daws*). '*T. biundularia* occurs in one locality in the Mansfield district in fair numbers in some seasons. Found from 1st to 15th June in good condition. Two forms occur, one very light, the other very dark, the melanic form in greater abundance than the light one. The two forms have been found in copulá. They are found in a small chestnut plantation at rest on the trunks of the chestnut trees.' (*W. Daws* in *Entom. Record*, vol. i., p. 34, 1890). Oxtou and Epperstone (*Saunt*). Chilwell, one dark specimen at rest, 24. v. 1898 (*Pearson*).

T. crepuscularia Hübn. Sherwood Forest, frequent (*Sterland*); common (*Brameld*). Ollerton (*Becher*). Thorney (*Henderson*); also taken by *Leivers* and *Carr*, May 1896). Common at Langford Moor in May (*Pike*). Oxtou and Epperstone (*Saunt*). Widmerpool (*Henderson*).

T. punctularia Hübn. Local but not uncommon where it occurs. Sherwood Forest, common (*Brameld*); rather common at rest on tree trunks, June 1871 (*Porritt*); taken also by D. H. Pearson, 22. v. 1893; and larvae near Edwinstowe by A. E. Hall and J. Batty, Aug. 1890. Clumber Park, etc., fairly common, 18—22. v. 1893, 30. iv.—23. v. 1894 (*Lady Robinson*). Ollerton (*Becher*). In several localities about Mansfield (*Daws*). Common at Langford Moor in May (*Pike*); in same locality, 1910—13 (*Saunt*).

[*Pachynemia hippocastanaria* Hübn. 'Once, in a house window at Edwinstowe' (*Sterland*). Presumably an error in identity].

EMATURGA Led.

- E. atomaria** L. Common on heaths. Sherwood Forest, common (*Brameld*). Common on heath in Clumber Park, Drinking-pit Lane, etc. (*Lady Robinson*). Ollerton (*Becher*). Common at Fountain Dale near Mansfield (*Daws*). Mansfield Forest near Blidworth, common (*Henderson*). Oxtun (*Saunt*). Langford Moor, common; Bunny (*Leivers, Carr*).

BUPALUS Leach.

- B. piniarius** L. Locally abundant in pine woods. Sherwood Forest—Clumber Park, the Birklands, the Bilhagh, Ollerton, Budby, etc.—often abundant. Wigsley Wood and Langford Moor, very common. Very common at Berry Hill, Mansfield: on May 26, 1896, I could have taken hundreds there (*Daws*). Many seen flitting round the tops of the trees in a Scotch fir plantation near Newstead, 4. vi. 1883 (*Wright*). Calverton; Owthorpe (*Saunt*).

THAMNONOMA Led. (*Halia* Dup.).

- T. wauaria** L. Common in gardens in the Worksop, Retford, Mansfield and Nottingham districts.

LOZOGRAMMA Steph.

- L. petraria** Hübn. Common amongst *Pteris aquilina*. Sherwood Forest, abundant throughout, from Worksop to Edwinstowe and Ollerton; also at Langford Moor. Wellow (*Becher*). Mansfield district, common in several places (*Daws*). Calverton; Oxtun; Epperstone (*Saunt*).

CHIASMIA Hübn.

- C. clathrata** L. Local and rare. Sherwood Forest, common (*Sterland*), but not recorded thence by any other collector. Langford Moor (*Leivers and Carr*).

ASPILATES Tr.

- A. gilvaria** Fab. 'Sherwood Forest, occasional, not common' (*Sterland*). Mansfield, rather more frequent than *ochrearia*: August 20, 1896 (*Daws*).
- A. ochrearia** Rossi. 'Very rare at Mansfield: 16. viii. 1896: a fine series taken at Thieves Wood' (*Daws*).
- A. strigillaria** Hübn. Very local and uncommon. Sherwood Forest, common (*Sterland*); occasionally (*Brameld*); June

1871, on the heath (*G. T. Porritt*). Mansfield, not common, 24. vi. 1897 (*Daws*).

NOLIDAE.

NOLA Leach.

N. cucullatella L. Fairly general and often common. Sherwood Forest, common (*Sterland, Brameld*). Shireoaks near Worksop (*Houghton*). Wellow (*Becher*). South Leverton, some years quite common in vicarage garden, flying at twilight (*Thornley*). Mansfield district, variable in its appearance, but some seasons very abundant, as in 1899, when it swarmed in gardens in Rosemary Lane, Mansfield, from June 20 to the middle of July (*Daws*). Stapleford, 1912-13 (*Dawson*). Bulwell and Carlton (near Nottingham), 1911 (*Saunt*). In plenty at Lenton gardens; also at Old Basford; obtained by beating the hedges in the daytime (*Henderson*). Very common at Lenton in July (*Pike*). Chilwell and Beeston (*Pearson*).

N. confusalis Herr.-Sch. Apparently very rare. Sherwood Forest, rare (*Brameld*).

CHLOËPHORIDAE.

HYLOPHILA Hübn.

H. prasinana L. Rather widely distributed but not very common. Sherwood Forest, common (*Brameld*); also taken by Porritt, June 1871; and larvae in plenty by Madden in Aug. 1872. Edwinstowe, 23. v. 1893 (*Pearson*). Rufford and Ollerton (*Becher*). Clumber Park, one or two specimens taken off palings, 12. vi. 1894 (*Lady Robinson*). Mansfield district, a few imagines taken, but common in the larval state, mostly however ichneumonated (*Daws*). Oxtun (*Saunt*). Nottingham Arboretum (*Carr*). Sherwood Lodge, Arnold; Widmerpool; taken most seasons (*Henderson*). Widmerpool (*Simmons*).

H. bicolorana Fuessl. Very rare. Langford Moor near Newark, 1911 (*Saunt*).

ZYGAENIDAE.

ZYGAENA Fab.

Z. trifolii Esp. Very rare. Sherwood Forest, occasional (*Sterland*). Gedling, one specimen about 1890 (*Leivers*).

- Z. lonicerae** Esp. Very local. Welham near Retford, many specimens flying in an old pasture on Retford road, 21. vii. 1900 (*Thornley*). Very abundant near Warsop; near Mansfield, 1859 (*Brameld*). Mansfield district, some seasons very plentiful, but very local: dates taken—4. vii. 1882, 26. vi. 1885, 22. vii. 1886, 16. vii. 1887 (*Daws*).
- Z. filipendulae** L. Widely distributed and often common. Sherwood Forest, common (*Sterland*, *Brameld*). Formerly at Carburton, but not lately (*Lady Robinson*). South Leverton and Welham, on the Retford road, common; Clarborough (*Thornley*). Mansfield district, not so common as *Z. lonicerae* (*Daws*). Common at Newstead, 4. vi. 1883 (*Wright*). In meadows at East Markham, Norwell Woodhouse, Ossington, Fiskerton; West Leake and Gotham Hills, 1906-7; in the utmost profusion in a meadow at Gedling, by the footpath to Lambley, in June 1887: many larvae found in the following spring from which imagines were bred; occasionally in meadows and by roadsides at Bunny, Cotgrave, Owthorpe, Widmerpool, East Leake, etc.

INO Leach.

- I. statices** L. Very local and scarce. Sherwood Forest, frequent (*Sterland*); common (*Brameld*); also recorded more recently by J. R. Hardy. Used to be common at Ratcher Hill near Mansfield, but disappeared after the firing of the surface growth: none seen since 1875, when it was flying on May 30 (*Daws*). A pair taken in a pasture at Newstead, 4. vi. 1883 (*Wright*). Two specimens taken in a field near Bunny Wood, June 1899 (*Henderson*); taken in same locality by A. Simmons.

PSYCHIDAE.

FUMEA Haw.

- F. casta** Pall. '*F. nitidella*': near Mansfield, 1859 (*Brameld* in *Ent. Wkly. Int.*, vii., 75). '*F. intermediella*': Clumber Park, 1902 (*Lady Robinson*).

SESIIDAE.

TROCHILIUM Scop.

- T. apiformis** Clerck. Very rare. One fresh ♀ on railing near Checker House station near Worksop, 9. vi. 1894; one fine ♀, evidently just emerged, hanging on railing at Worksop station, May 27—year not given (*Hardy*).

- T. crabroniformis** Lewin. Very rare. 'I saw a specimen in Clumber Park in 1872' (*Brameld*). One specimen at Mansfield, 26. vi. 1889 (*Daws*). Bulwell (*Simmons*). One specimen taken at Beeston (*Pearson*).

SESIA Fab.

- S. tipuliformis** Clerck. Widely distributed, and probably common in most gardens where old currant bushes grow. Worksop, one specimen in garden (*Lady Robinson*). Rufford and Wellow (*Becher*). South Leverton, one or two in garden, 2. vii. 1898 (*Thornley*). Mansfield district, common some seasons (*Daws*). Stapleford (*Dawson*). Nottingham, common on currant bushes, July 1883 (*Wright*). Plentiful in gardens among currant trees: imagines fond of sucking honey from flowers of privet (*Henderson*). Common at Lenton in old gardens (*Pike, Simmons*). West Bridgford, not uncommon (*Wallis*). Chilwell and Lowdham, not rare (*Pearson*).
- S. vespiformis** L. Very rare. Two specimens taken in Sherwood Forest in the autumn of 1877 (*G. Dennis* and *C. W. Simmons* in *Entom.*, 1877).
- S. myopaeformis** Bork. Very rare. Sherwood Forest, 'frequent' (*Sterland*). One specimen in garden at Mansfield, 4. vii. 1890 (*Daws*).
- S. culiciformis** L. Very rare. 'One fine specimen beaten from birch, about one mile from Edwinstowe, June 9th' (*Hardy*).

COSSIDAE.

COSSUS Fab.

- C. cossus** L. (*C. ligniperda* Fab.). Generally distributed and fairly common, but most frequently seen in the larval stage. Sherwood Forest, larvae very common (*Brameld*). Southwell and Wellow (*Becher*). Many of the willows in South Leverton and neighbouring parishes have *Cossus* burrows in them (*Thornley*). Marnham, not uncommon (*Cunningham*). Mansfield district, not common in imago state: larvae often found in ash and birch (*Daws*). Stapleford, 1908 (*Dawson*). Two imagines at rest on palings on Bulwell Forest in 1900; larvae fairly common about Basford, Bulwell and Lenton, in ash, oak and elm trees (*Henderson*). Nottingham, July 1883, 'a splendid pair taken at light' (*Wright*). Larvae rather common about Nottingham, West Bridgford, Wilford,

Colwick, Langar, Beeston, etc. Kingston-upon-Soar, 1909 (*Thornley*).

ZEUZERA Latr.

- Z. pyrina** L. Generally distributed and of frequent occurrence. Sherwood Forest, occasionally (*Brameld*). Welbeck, 1902 (*Lady Robinson*). Wellow; Southwell (*Becher*). Grove near Retford, one specimen found dead in the church, 1899; one specimen in Greasley Church near Kimberley, 1880 (*Thornley*). Mansfield district, rather scarce: a pair taken in cop., 23. vi. 1891 (*Daws*). Stapleford, 1907 (*Dawson*). Basford, 1899, two specimens; also one at Lenton (*Henderson*). Nottingham, one at light, July 1883 (*Wright*); two on trunk of an old ash-tree in a garden, 1888 (*Leivers*); one at Sherwood Rise, May 1900 (*Carr*). West Bridgford (*Simmons, Wallis*). Chilwell, several specimens taken at rest (*Pearson*). Gedling, 1911 (*Saunt*).

HEPIALIDAE.

HEPIALUS Fab.

- H. humuli** L. Common and generally distributed.
- H. sylvina** L. (*H. sylvanus* L.). Fairly general and frequent. Sherwood Forest, common (*Brameld*). Ollerton (*Becher*). Worksop, infrequent (*Lady Robinson*). South Leverton, occasional (*Thornley*). Mansfield district, fairly common (*Daws*). Nottingham; Calverton; Oxtun; Epperstone (*Saunt*). Sparingly at Colwick Wood (*Wright*). Lenton (*Pike*). West Bridgford, occasionally (*Simmons, Wallis*). Chilwell (*Pearson*).
- H. fusconebulosa** De Geer. (*H. vellela* Hübn.). Common in Sherwood Forest, scarce elsewhere. Recorded for the Forest by Sterland, Brameld, R. and W. Tyrer, Porritt and others. Lady Robinson and Rev. E. G. Alderson report it as occurring in the utmost profusion in the Worksop district, particularly in Clumber Park and the Sparken Hill Woods: several of the unicolorous variety *gallicus* Led. were obtained, with others of a rich mahogany red, some a very dark brown in colour, and one in which 'the ground colour was nearly black, the silvery markings standing out with fine effect.' Further south it has been taken at Wollaton, Calverton, Oxtun and Epperstone (*Saunt*), and sparingly at Colwick Wood.
- H. lupulina** L. Common throughout the county.

- H. hecta** L. Common and generally distributed wherever bracken grows freely. Swarms on the bracken and at rest on palings in Clumber Park (*Lady Robinson* and *Rev. F. G. Alderson*). Common in the Mansfield district (*Daws*); in many places about Nottingham; and at Bunny. Chilwell, at light, Aug. 1901 (*Pearson*).

PYRALIDAE.

GALLERIINAE.

ACHROIA Hübn.

- A. grisella** Fab. Worksop district (*Houghton*).

APHOMIA Hübn.

- A. sociella** L. Sherwood Forest, rare (*Brameld*). South Leverton, not at all uncommon: often found at rest in vicarage (*Thornley*).

CRAMBINAE.

CRAMBUS Fab.

- C. inquinatellus** Schiff. Sherwood Forest, common (*Birchall*, 1872; *Dennis* and *Simmons*, 1877; *Porritt*, 1894). Common at Clumber (*Brameld*). Clumber Park, 14. viii. 1894 (*Lady Robinson*). Edwinstowe, 18. vii. 1901 (*Carr*), and 3. viii. 1914 (*Saunt*). Mansfield district, frequent (*Daws*). Bulwell, 8. viii. 1914 (*Saunt*).
- C. geniculeus** Haw. Mansfield district, rare (*Daws*).
- C. contaminellus** Hübn. Mansfield district, not common (*Daws*).
- C. tristellus** Fab. Common. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). South Leverton, common (*Thornley*). Mansfield district, common (*Daws*). Misson; Nottingham; Cotgrave (*Carr*). Langford Moor; Nottingham; Bulwell; Annesley; Barnstone; etc. (*Saunt*). Chilwell (*Pearson*). Stapleford (*Dawson*).
- C. selasellus** Hübn. Worksop (*Houghton*).
- C. perlellus** Scop. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Mansfield district, plentiful (*Daws*). East Leake; Cotgrave, 21. vi. 1913; Owthorpe (*Saunt*).

- var. *warringtonellus* Stt. Mansfield district, plentiful (*Daws*). Barnstone, 22. vii. 1911 (*Saunt*).
- C. pinellus** L. Sherwood Forest and Worksop district, common. Mansfield district, fairly common (*Daws*). Langford Moor (*Saunt*).
- C. falsellus** Schiff. South Leverton (*Thornley*).
- C. chrysonuchellus** Scop. Mansfield district, rather rare (*Daws*).
- C. craterellus** Scop. Mansfield district, frequent (*Daws*).
- C. hortuellus** Hübn. Common. Sherwood Forest, common (*Brameld*). Worksop district (*Houghton*). South Leverton (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*). Chilwell (*Pearson*). East Leake; Owthorpe (*Saunt*). Sherwood Lodge, Arnold; Nottingham; Gonalston; Bunny.
- C. culmellus** L. Widely distributed and common. Sherwood Forest, common (*Brameld*). Clumber Park (*Lady Robinson*). Edwinstowe, abundant in July 1901 (*Thornley and Carr*). South Leverton, common (*Thornley*). Mansfield district, common (*Daws*). Langford Moor; Bulwell; East Leake (*Saunt*). Chilwell (*Pearson*). Nottingham, frequent; Cotgrave.
- C. pratellus** L. Widely distributed and common. Sherwood Forest, common (*Brameld*). North and South Leverton, common (*Thornley*). Mansfield district, fairly abundant (*Daws*). Stapleford (*Dawson*). Owthorpe and Cotgrave (*Saunt*). Nottingham; Southwell; Gonalston; Bunny; Widmerpool; common.
- C. silvellus** Hübn. Mansfield district, fairly common (*Daws*).
- C. pascuellus** L. Sherwood Forest, occasionally (*Brameld*). Langford Moor, 13. vii. 1913; Owthorpe, 20. vi. 1914 (*Saunt*).
- C. uliginosellus** Zell. Mansfield district, fairly common (*Daws*).

SCHOENOBIINAE.

SCHOENOBIUS Dup.

- S. gigantellus** Schiff. Stapleford, 1912 (*Dawson*).
- S. forficellus** Thunb. Sherwood Forest, common but local (*Brameld*). Worksop (*Houghton*). Stapleford (*Dawson*).

ACENTROPUS Curt.

- A. niveus** Oliv. Worksop (*Houghton*). Mansfield district, plentiful some seasons (*Daws*).

PHYCITINAE.

HOMOEOSOMA Curt.

- H. nebulella** Hübn. Worksop (*Houghton*).
H. nimbella Zell. Worksop (*Houghton*).

EPHESTIA Guen.

- E. kuehniella** Zell. 'Some taken in my house at Mansfield, probably introduced in flour' (*Daws*, 1901).
E. calidella Gn. 'Sherwood Forest, rare, at sugar' (*Brameld*). Mansfield, a few from dried fruits (*Daws*).
E. elutella Hübn. Worksop (*Lady Robinson*, *Houghton*).

EUZOPHERA Zell.

- E. pinguis** Haw. Sherwood Forest, rare (*Brameld*).

SALEBRIA Zell.

- S. betulae** Göze. Edwinstowe (*Lady Robinson*). Nottingham; Langford Moor (*Saunt*).
S. fusca Haw. Worksop (*Houghton*).

PHYCITA Curt.

- P. spissicella** Fab. Sherwood Forest, occasionally (*Brameld*). Worksop (*Houghton*). Nottingham, 1909 (*Saunt*).

ACROBASIS Zell.

- A. zelleri** Rag. Sherwood Forest, frequent (*Brameld*).
A. consociella Hübn. Sherwood Forest, rare (*Brameld*). Langford Moor, 27. vii. 1912 (*Saunt*).

RHODOPHAEA Guen.

- R. advenella** Zinck. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*).

MYELOIS Hübn.

- M. cribrella** Hübn. Mansfield district, a few pupae in thistles (*Daws*).

CRYPTOBLABES Zell.

- C. bistriga** Haw. Clumber Park, 29. vi. 1894 (*Lady Robinson*).

PYRALINAE.

AGLOSSA Latr.

- A. pinguinalis** L. Common. Sherwood Forest, very common (*Brameld*). Common in stables and outbuildings at Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, not uncommon in stables and outhouses (*Thornley*). Mansfield, common in stables (*Daws*). Nottingham, common (*Carr*). Stapleford (*Dawson*). Chilwell; Bunny (*Pearson*).

HYP SOPY G I A Hübn.

- H. costalis** Fab. Worksop district (*Houghton*). Epperstone Park, 1909 (*Saunt*).

PYRALIS L.

- P. farinalis** L. Sherwood Forest, common (*Brameld*). Common in stables, etc., at Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, not uncommon in outhouses and stables (*Thornley*). Mansfield, fairly common in stables (*Daws*). Nottingham (*Saunt*). Chilwell (*Pearson*).

HERCULIA Wlk.

- H. glaucinalis** L. Sherwood Forest, occasionally at sugar (*Brameld*). Clumber Park (*Lady Robinson*). Edwinstowe; Wellow (*Becher*). South Leverton, in outhouse and at sugar in garden (*Thornley*). Mansfield district, scarce (*Daws*). Epperstone Park, 1909-10-11 (*Saunt*).

HYDROCAMPINAE.

NYMPHULA Schrk.

- N. stagnata** Don. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*). Mansfield district, common (*Daws*). Stapleford, 1912-13 (*Dawson*). Tollerton (*Saunt*).

N. nymphaeata L. Sherwood Forest, common (*Brameld*). Mansfield district, plentiful (*Daws*). Stapleford, 1912 (*Dawson*).

N. stratiotata L. Worksop, 17. viii. 1900 (*Houghton*). Shireoaks, 1901 (*Lady Robinson*).

CATACLYSTA Hübn.

C. lemnata L. Sherwood Forest, common (*Brameld*). Pond near Idle Stop, Misson, rather commonly, 7. viii. 1901; Scaftworth, 12. viii. 1901 (*Carr*). Mansfield district, not common (*Daws*). Stapleford, 1912 (*Dawson*).

EURRHYPARA Hübn.

E. urticata L. Common. Sherwood Forest, abundant (*Brameld*). Worksop district, common amongst nettles (*Lady Robinson*). Ollerton; Wellow (*Becher*). South Leverton, common (*Thornley*). Stapleford, common (*Dawson*). Mansfield district, common on nettles (*Daws*). Nottingham; Trowell; Epperstone Park; Stoke Bardolph; Edwalton (*Saunt*). Chilwell, common (*Pearson*).

SCOPARIINAE.

SCOPARIA Haw.

S. cembrae Haw. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*). Epperstone Park, 1909-10-11 (*Saunt*). Nottingham, 1. viii. 1911 (*F. M. Robinson*).

S. ambigualis Tr. Common. Sherwood Forest, common (*Brameld*). Very common in Clumber Park, etc. (*Lady Robinson*). South Leverton, common on tree trunks (*Thornley*). Mansfield district, frequent (*Daws*). Langford Moor (*Saunt*). Harlow Wood near Mansfield; Sherwood Lodge, Arnold; Beauvale Woods.

S. basistrigalis Knaggs. Oxton, 1912; Epperstone, 14. vi. 1914; Edwinstowe, 8. viii. 1914 (*Saunt*).

S. dubitalis Hübn. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Mansfield district, fairly common (*Daws*). Harlow Wood near Mansfield, 6. vii. 1901 (*Carr*). Langford Moor, 1912-13; Epperstone Park, 1912 (*Saunt*).

S. murana Curt. Mansfield district, rather scarce (*Daws*).

S. lineola Curt. Sherwood Forest, rare (*Brameld*).

- S. resinea** Haw. Worksop district (*Houghton*). South Leverton (*Thornley*).
- S. truncicolella** Stt. Sherwood Forest, rare (*Brameld*); numerous (*Dennis, Simmons*); in plenty about oak trunks, August 13—17, 1894 (*Porritt*). Clumber Park, 14. viii. 1894 (*Lady Robinson*). Epperstone Park (*Saunt*).
- S. crataegella** Hübn. Fairly distributed in the Mansfield district (*Daws*).
- S. frequentella** Stt. Sherwood Forest, common (*Brameld*). Mansfield district, not common (*Daws*). Farnsfield, 3. viii. 1914 (*Saunt*). Nottingham, common, 7. vi. to 17. vii. 1901.
- S. angustea** Steph. Worksop (*Houghton*). Mansfield district, not common (*Daws*).

PYRAUSTINAE.

SYLEPTA Hübn.

- S. ruralis** Scop. Sherwood Forest, abundant (*Brameld*). Wellow; Southwell (*Becher*). South Leverton, common (*Thornley*). Chilwell, common (*Pearson*). Stapleford (*Dawson*). Edwalton; Plumtree; East Bridgford (*Saunt*).

NOMOPHILA Hübn.

- N. noctuella** Schiff. Sherwood Forest, occasionally (*Brameld*). Worksop (*Houghton*). Epperstone Park; Mansfield, 1. vi. 1913; Sneinton, Nottingham, 2. xi. 1914 (*Saunt*). Kingston-upon-Soar, 22. vii. 1904 (*Thornley*).

PHLYCTAENODES Hübn.

- P. verticalis** L. Worksop, 1900, abundant (*Lady Robinson*).
- P. sticticalis** L. Rare. Sherwood Forest, one specimen, Aug. 13, 1858 (*J. Batty* in *Ent. Wkly. Intell.*, iv.). Mansfield, one specimen (*Daws*).

PIONEA Guen.

- P. crocealis** Hübn. Sherwood Forest, rare (*Brameld*). Worksop, 1900 (*Lady Robinson*). Stapleford, 1912 (*Dawson*).
- P. prunalis** Schiff. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Wellow (*Becher*). South Leverton, 15. vii. 1901 (*Thornley*). Mansfield district, frequent (*Daws*).

- P. forficalis** L. Common. Sherwood Forest, common (*Brameld*). Worksoop district, common everywhere (*Lady Robinson*). South Leverton, common (*Thornley*). Southwell (*Becher*). Mansfield district, very common (*Daws*). Stapleford, common (*Dawson*). Epperstone Park; Plumtree (*Saunt*). Chilwell, common (*Pearson*). Nottingham.
- P. lutealis** Hübn. Sherwood Forest, common (*Brameld*); taken there by J. Batty, 13. viii. 1858. Worksoop (*Lady Robinson*). Rufford; Wellow (*Becher*). Treswell Wood, 16. viii. 1901 (*Thornley*). Common in my garden at Mansfield (*Daws*). Stapleford, common (*Dawson*). Epperstone Park; Bunny (*Saunt*). Chilwell, 16. vii. 1901 (*Pearson*). Everton, among reeds by side of wet ditch, 12. viii. 1901; Cotgrave, 5. viii. 1901 (*Carr*). Bulwell and Watnall, 12. viii. 1909 (*Robinson*).
- P. olivalis** Schiff. Sherwood Forest, common (*Brameld*). Worksoop (*Houghton*). Wellow (*Becher*). South Leverton, generally common in vicarage garden in July; Kingston-upon-Soar, 22. vii. 1904 (*Thornley*). Mansfield district, very common (*Daws*). Stapleford, common (*Dawson*). Epperstone Park; Calverton (*Saunt*). Chilwell (*Pearson*).

PYRAUSTA Schrk.

- P. sambucalis** Schiff. Sherwood Forest, common (*Brameld*). Worksoop (*Lady Robinson*). Wellow (*Becher*). South Leverton, common at lime blossom, 22. vii. 1900 (*Thornley*). Mansfield district, common (*Daws*). Stapleford (*Dawson*). Nottingham, frequent.
- P. asinalis** Hübn. Mansfield, only one specimen taken (*Daws*).
- P. cespitalis** Schiff. Sherwood Forest, occasionally (*Brameld*). Worksoop (*Lady Robinson*). Epperstone Park, common, 19. v. 1901 (*Carr*); taken in same locality in 1912 (*Saunt*). Cotgrave, 5. viii. 1901 (*Carr*). Gotham Hills, 30. vii. 1904 (*Thornley*).
- P. purpuralis** L. Sherwood Forest, twice taken (*Brameld*). Worksoop district (*Houghton*). Mansfield district, frequent (*Daws*). Gotham and West Leake Hills and Kingston-upon-Soar, common, July 20—30 (*Thornley*). Cotgrave, 5. viii. 1901 (*Carr*). East Leake, 11. vii. 1914 (*Saunt*).
- var. *ostrinalis* Hübn. Mansfield district, frequent (*Daws*).

PTEROPHORIDÆ.

PLATYPTILIA Hübn.

- P. gonodactyla** Schiff. Sherwood Forest, frequent (*Brameld*).

Sand quarry by station, Worksop, 2. vi. 1908 (*Thornley*).
Mansfield district, frequent (*Daws*). Nottingham; Kingston-upon-Soar.

ALUCITA L.

- A. galactodactyla** Hübn. Wellow Park, bred from larvae on leaves of burdock, May 1900 (*Becher*).
A. pentadactyla L. Very common throughout the county on *Volulus sepium*.
A. tetradactyla L. Sherwood Forest, rare (*Brameld*). Langford Moor, 14. vii. 1911 (*Saunt*).

PTEROPHORUS Geoffr.

- P. lithodactylus** Tr. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*).
P. monodactylus L. Sherwood Forest, common (*Brameld*). Clumber Park, common, Feb. 5—April 11 (*Lady Robinson*). Ollerton, 6. iv. 1892; Wellow, Aug. 1896 (*Becher*). Nottingham, 1910 (*Saunt*).
P. osteodactylus Zell. Sherwood Forest, common (*Brameld*). Worksop and Clumber Park (*Lady Robinson*).

STENOPTILIA Hübn.

- S. zophodactyla** Dup. Worksop district (*Houghton*).
S. bipunctidactyla Haw. Sherwood Forest, twice taken (*Brameld*). Mansfield district, rather rare (*Daws*). Stapleford, 1912 (*Dawson*). Gamston near Nottingham, 21. xi. 1911 (*Saunt*).
S. pterodactyla L. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Wellow (*Becher*). Mansfield district, not common (*Daws*). Stapleford; Langford Moor (*Dawson*). Nottingham, 21. xi. 1908 (*Saunt*). Kingston-upon-Soar, August 1904 (*Thornley*).

ORNEODIDAE.

ORNEODES Latr.

- O. hexadactyla** L. Generally distributed and rather common. Sherwood Forest, abundant (*Brameld*). Park House gardens, Worksop, frequent (*Lady Robinson*). Worksop

(*Houghton*). Wellow; Southwell (*Becher*). South Leverton, common (*Thornley*). Frequent in the Mansfield district (*Daws*). Nottingham (*Carr, Saunt*, etc.). Langford Moor (*Saunt*). Chilwell, common on honeysuckle (*Pearson*).

TORTRICIDAE.

TORTRICINAE.

ACALLA Hübn.

- A. emargana** Fab. Sherwood Forest, frequent (*Brameld*).
- A. cristana** Fab. Mansfield district, frequent (*Daws*).
- A. hastiana** L. Mansfield district, frequent (*Daws*).
- A. logiana** Schiff. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*).
- A. variegana** Schiff. Sherwood Forest, common (*Brameld*). South Leverton, beaten from hedges, occasionally common (*Thornley*). Mansfield district, frequent (*Daws*). Nottingham; Owthorpe (*Saunt*). Stapleford (*Dawson*).
- A. sponsana** Fab. Sherwood Forest, rare (*Brameld*). Stapleford, 1912 (*Dawson*).
- A. schalleriana** Fab. Sherwood Forest, common (*Brameld*). Worksop, 17. viii. 1900, and in 1901 (*Houghton*).
- A. comparana** Hübn. Sherwood Forest, common (*Brameld*). Worksop, 14. viii. 1900, and in 1901 (*Houghton*); also taken there by Lady Robinson.
- A. ferrugana** Tr. Sherwood Forest, common (*Brameld*). Common, Clumber Park, etc., March 14—31 and August 14, 1894 (*Lady Robinson*). Owthorpe (var. *tripunctana* Hb.), 6. vi. 1914 (*Saunt*).
- A. holmiana** L. Sherwood Forest, common (*Brameld*). South Leverton (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford, 2. viii. 1913 (*Dawson*). Nottingham, 1. vi. 1912 (*Saunt*).
- A. contaminana** Hübn. Clumber Park, March 13th (*Lady Robinson*). South Leverton, not uncommon, taken as late as Sept. 6; Caddow Wood, North Leverton, 27. vii. 1900 (*Thornley*). 'The larvae occurred in great numbers on apple trees at Southwell in 1884, and were largely picked off and eaten by sparrows. The larvae were identified by Mr. C. G. Barrett as those of *Teras contaminana*' (*Captain Becher*

in *Zoologist*, Sept. 1884, p. 342). Nottingham, 1911-12 (*Saunt*). Stapleford (*Dawson*).

DICHELIA Guen.

D. grotiana Fab. Clumber Park (*Lady Robinson*).

CAPUA Steph.

- C. angustiorana** Haw. Sherwood Forest, rare (*Brameld*). Worksop (*Lady Robinson*). South Leverton, not uncommon, particularly in yew hedges (*Thornley*). Nottingham, 13. vii. 1901; Bulwell (*Carr*). Chilwell, 11—20. vii. 1901 (*Pearson*).
- C. favillaceana** Hübn. Clumber Park, common, May 15—June 11 (*Lady Robinson*).

CACOECIA Hübn.

- C. podana** Scop. Common. Sherwood Forest, common at sugar (*Brameld*). Park House gardens, Worksop, fairly common (*Lady Robinson*). South Leverton, common (*Thornley*). Mansfield district, a few taken (*Daws*). Nottingham district, common (*Carr*). Chilwell (*Pearson*). Stapleford (*Dawson*). Calverton (*Saunt*).
- C. crataegana** Hübn. Sherwood Forest, common (*Brameld*). Mansfield district, fairly common (*Daws*).
- C. xylostearia** L. Sherwood Forest, common (*Brameld*). Worksop district (*Lady Robinson*). Epperstone Park, 25. vi. 1913 (*Dawson*). Nottingham, June 1914 (*Saunt*).
- C. rosana** L. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*, *Houghton*). South Leverton, common (*Thornley*). Mansfield district, fairly common (*Daws*). Stapleford (*Dawson*).
- C. sorbiana** Hübn. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Epperstone Park (*Saunt*). Stapleford (*Dawson*).
- C. costana** Fab. Sherwood Forest, local (*Brameld*). Stapleford, 1913 (*Dawson*). Nottingham, 6. vi. 1914 (*Saunt*).
- C. musculana** Hübn. Sherwood Forest, common (*Brameld*). Clumber Park, fairly common, 8. v. to 12. vi. 1894 (*Lady Robinson*). North Leverton, 18. v. 1901 (*Thornley*). Beauvale Woods, 25. v. 1901.
- C. unifasciana** Dup. Sherwood Forest, abundant (*Brameld*). Worksop district (*Houghton*). South Leverton, common in

vicarage garden (*Thornley*). Calverton, 14. vii. 1914 (*Saunt*). Nottingham, in garden, 26. vi.—30. vii.; Chilwell, 5. vi. 1901.

C. lecheana L. Sherwood Forest, occasionally (*Brameld*). Clumber Park; Park House gardens, Worksop (*Lady Robinson*). Worksop (*Houghton*). Treswell Wood, common, 15. vi. 1901 (*Thornley*). Ploughman Wood, Lowdham, common, 11. vi. 1901; Widmerpool.

PANDEMIS Hübn.

P. corylana Fab. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Treswell Wood, a few, 5. viii. 1901 (*Thornley*). Langford Moor, 28. vii. 1912; Bulwell (*Saunt*). Stapleford (*Dawson*).

P. ribeana Hübn. Sherwood Forest, occasionally (*Brameld*). Park House gardens, Worksop; Clumber Park; etc., June 27 to July 2 (*Lady Robinson*). Mansfield district, frequent (*Daws*). Nottingham, 14. viii. 1905 (*Thornley*). Epperstone Park, 23. v. 1909 (*Saunt*).

P. cinnamomeana Tr. Worksop district (*Lady Robinson*). Mansfield district, fairly common (*Daws*).

P. heparana Schiff. Sherwood Forest, common (*Brameld*). Worksop district (*Lady Robinson*). South Leverton, common in vicarage garden in July (*Thornley*). Nottingham, frequent.

EULIA Hübn.

E. ministrana L. Sherwood Forest, common (*Brameld*). Manor Hills, Worksop; Clumber Park; etc., common, 23. v.—14. vi. 1894 (*Lady Robinson*). North and South Leverton, not uncommon, 24. v.—8. vi. (*Thornley*). Nottingham; Langford Moor, 25. v. 1913; Owthorpe, 6. vi. 1914 (*Saunt*). Trowell (*Dawson*). Widmerpool, 1. vi. 1901.

TORTRIX L.

T. forskaleana L. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). Mansfield district, frequent (*Daws*). South Leverton, not uncommon in July (*Thornley*).

T. bergmanniana L. Sherwood Forest, common (*Brameld*). Park House gardens, Worksop, etc., common (*Lady Robinson*). South Leverton, frequently bred from rose leaves (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*). Chilwell, July 11—28 (*Pearson*).

- T. conwayana** Fab. Sherwood Forest, common (*Brameld*). Clumber, 3. vii. 1894 (*Lady Robinson*). Treswell Wood, 4. vi. 1900 (*Thornley*). Lowdham, common amongst honeysuckle, 11. vi. 1901; Widmerpool, 1. vi. 1901.
- T. loeflingiana** L. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). South Leverton, 23. vii. 1901 (*Thornley*). Mansfield district, frequent (*Daws*).
- T. viridana** L. Abundant in woods. Sherwood Forest, very abundant. Worksop district, abundant everywhere, often almost defoliating the oaks (*Lady Robinson*). South Leverton, common; Treswell Wood, abundant (*Thornley*). Mansfield district, a pest (*Daws*). Harlow Wood, very abundant; abundant in woods about Sherwood Lodge, Arnold; Langford Moor and Epperstone Park, common (*Carr*). Owthorpe (*Saunt*). Stapleford, common (*Dawson*).
- T. forsterana** Fab. Sherwood Forest, common (*Brameld*). Park House gardens, Worksop, 7. v. and 20. vi. 1894 (*Lady Robinson*). South Leverton, 13. vii. 1900 (*Thornley*). Mansfield district, frequent (*Daws*). Frequent in Nottingham gardens in June and July (*Carr*). Chilwell, 18. v. 1901 (*Pearson*). Stapleford (*Dawson*).
- T. viburniana** Fab. Mansfield district, frequent (*Daws*).
- T. paleana** Hübn. Sherwood Forest, local (*Brameld*). Mansfield district, frequent (*Daws*).
- T. dumetana** Tr. Mansfield district, fairly common (*Daws*). Epperstone Park, 25. vi. 1914 (*Saunt*).

CNEPHASIA Curt.

- C. longana** Haw. (*C. ictericana* Haw.). Sherwood Forest, local (*Brameld*). South Leverton, one example in vicarage garden, 1900 (*Thornley*). Chilwell, 11. vii. 1901 (*Pearson*).
- C. conspersana** Dougl. Worksop district (*Houghton*).
- C. octomaculana** Curt. Sherwood Forest, frequent (*Brameld*).
- C. virgaureana** Tr. (*C. wahlbomiana* L., var. *virgaureana*). Sherwood Forest, frequent (*Brameld*). Worksop (*Houghton*). Nottingham, June 1914 (*Saunt*).
- C. incertana** Tr. (*C. subjectana* Gn.). Sherwood Forest, common (*Brameld*). Park House gardens, Worksop, 25. vi. 1894 (*Lady Robinson*). South Leverton, common in hedges (*Thornley*). Nottingham, 13. vii. 1901; Bunny, 15. vi. 1901 (*Carr*). Chilwell, 16. vi. 1901 (*Pearson*).

CHEIMATOPHILA Steph.

- C. tortricella** Hübn. (*C. hyemana* Hübn.). Sherwood Forest, common (*Brameld*). Worksop district, abundant and universally distributed, Feb. 5—March 25 (*Lady Robinson*). Very common in Thieves Wood near Mansfield, flying in the sunshine (*Daws*).

EXAPATE Hübn.

- E. congelatella** Clerck. South Leverton, one ♂, 16. xi. 1888 (*Thornley*).

ANISOTAENIA Steph.

- A. hybridana** Hübn. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Treswell Wood (*Thornley*).
- A. ulmana** Hübn. Worksop, 1901 (*Houghton*).

CONCHYLINAE.

LOZOPERA Steph.

- L. francillana** Fab. Worksop, 1901 (*Houghton*).

CONCHYLIS Led.

- C. dubitana** Hübn. Worksop district, 25. v., 27. vii., 1900, and in 1901 (*Houghton*).
- C. atricapitana** Steph. Worksop, 1901 (*Houghton*).
- C. nana** Haw. Manor Hills, Worksop (*Lady Robinson*).
- C. hartmanniana** Clerck. Sherwood Forest, local (*Brameld*). Mansfield district, frequent (*Daws*).
- C. badiana** Hübn. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Mansfield district, frequent (*Daws*).
- C. cnicana** Doubl. Worksop (*Houghton*). Edwinstowe, 12. vi. 1912 (*Carr*). Mansfield district, frequent (*Daws*). Owthorpe, 14. vi. 1914 (*Saunt*).

EUXANTHIS Meyr.

- E. hamana** L. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Park House gardens, Worksop, 3. vii. 1894 (*Lady Robinson*). South Leverton, common in lanes flying amongst grass at dusk: comes freely to light;

Treswell, common (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*).

E. zoegana L. Sherwood Forest, common (*Brameld*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*). Owthorpe, 21. ix. 1907 (*Saunt*).

E. straminea Haw. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Mansfield district, frequent (*Daws*). Owthorpe, 6. vi. 1914 (*Saunt*).

E. angustana Hübn. Mansfield district, frequent (*Daws*).

PHTHEOCHROA Steph.

P. rugosana Hübn. Sherwood Forest, frequent (*Brameld*). Bulwell, 1914 (*F. Hind*).

OLETHREUTINAE.

EVETRIA Hübn.

E. pinivorana Zell. Sherwood Forest, occasionally (*Brameld*). Bred, 21. v. 1905, from a larva found in Clumber Park (*Lady Robinson*).

OLETHREUTES Hübn.

O. corticana Hübn. Park House gardens, Worksop; Clumber Park; June 20—29 (*Lady Robinson*). Oxtou (*Saunt*).

O. betulaetana Haw. Sherwood Forest, common (*Brameld*). Worksop district (*Houghton*).

O. sororculana Zett. Clumber Park, 14. viii. 1894 (*Lady Robinson*).

O. variegana Hübn. Sherwood Forest, frequent (*Brameld*). Worksop (*Lady Robinson*). South Leverton, common in vicarage garden in July (*Thornley*). Mansfield district, frequent (*Daws*). Nottingham, 30. vi. and 2. vii. 1901 (*Carr*). Chilwell, 16. vi. 1901 (*Pearson*).

O. pruniana Hübn. Sherwood Forest, occasionally (*Brameld*). Worksop (*Houghton*). South Leverton, common in vicarage garden in July; Treswell Wood, 15. vi. 1901 (*Thornley*). Southwell, 8. vi. 1901; Gonalston, 8. vi. 1901; Bunny, 15. vi. 1901 (*Carr*). Nottingham; Tollerton (*Saunt*).

O. ochroleucana Hübn. Sherwood Forest, frequent (*Brameld*). South Leverton (*Thornley*).

- O. profundana** Fab. Sherwood Forest, frequent (*Brameld*).
O. nigricostana Haw. Sherwood Forest, rare (*Brameld*).
O. purpurana Haw. (*O. rufana* Scop., var. *purpurana* Haw.).
 Worksop, 1901 (*Houghton*).
O. striana Schiff. Sherwood Forest, frequent (*Brameld*).
 Worksop district (*Houghton*).
O. urticana Hübn. Sherwood Forest, common (*Brameld*).
 Mansfield district, frequent (*Daws*).
O. lacunana Dup. Park House gardens, Worksop, 25. vi.
 1894 (*Lady Robinson*). South Leverton, not uncommon
 (*Thornley*). Harlow Wood near Mansfield, 6. vii.; South-
 well, 8. vi.; Bulwell Forest, 9. vi.; Sherwood Lodge,
 Arnold, 27. vi.; Nottingham, 2. viii.; Chilwell, 5. vii.;
 Bunny, 15. vi.—all 1901.
O. bifasciana Haw. Clumber Park, 1902 (*Lady Robinson*).
O. ericetana Westw. Shireoaks near Worksop, 1904 (*Lady*
Robinson).

LOBESIA Guen.

- L. permixtana** Hübn. Sherwood Forest, rare (*Brameld*).
 Clumber, 25. v.—11. vi. (*Lady Robinson*).

STEGANOPTYCHA Steph.

- S. nigromaculana** Haw. Near Worksop, 1904 (*Lady Robinson*).
S. ramella L. Worksop, 1901 (*Houghton*).
S. diniana Guen. (*S. occultana* Dougl.). Shireoaks, 1901
 (*Houghton*).
S. corticana Hübn. Sherwood Forest, common (*Brameld*).
 Clumber Park, 14. viii. 1894 (*Lady Robinson*). Sherwood
 Forest near Edwinstowe; very abundant on tree trunks,
 18. vii. 1901 (*Thornley* and *Carr*). South Leverton, very
 common on trunk of oak tree in vicarage garden during
 July, in great variety (*Thornley*).
S. nanana Tr. Worksop district, 19. vii. 1902 (*Lady Robinson*).
 Sherwood Lodge, Arnold, 27. vi. 1901.
S. cruciana L. Shireoaks near Worksop, locally common
 (*Houghton*).
S. trimaculana Don. Worksop district (*Lady Robinson*).
 Chilwell, 5. vii. 1901 (*Carr*). Nottingham, June 1914
 (*Saunt*).

GYPSONOMA Meyr.

- G. aceriana** Dup. Nottingham, in my garden on Mansfield road, 3. vii. 1901.
- G. incarnana** Haw. Worksop (*Lady Robinson* and *J. T. Houghton*). Clumber Park (*Lady Robinson*).

BACTRA Steph.

- B. lanceolana** Hübn. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). South Leverton, on a gate post, 6. v. 1901; Treswell Wood, 7. v. 1900 (*Thornley*). Harlow Wood near Mansfield, 6. vii. 1901.

SEMASIA Steph.

- S. hypericana** Hübn. Sherwood Forest, common (*Brameld*). Clumber Park (*Lady Robinson*).

NOTOCELIA Meyr.

- N. uddmanniana** L. Sherwood Forest, occasionally (*Brameld*). Worksop (*Lady Robinson*). South Leverton (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*). Chilwell, 15. vii. 1901 (*Pearson*).
- N. suffusana** Zell. (*N. trimaculana* Haw.). Sherwood Forest, frequent (*Brameld*).
- N. rosaecolana** Doubl. Stapleford (*Dawson*).
- N. roborana** Tr. Sherwood Forest, frequent (*Brameld*). Clumber Park (*Lady Robinson*). South Leverton, not uncommon in vicarage garden in July (*Thornley*). Chilwell (*Pearson*).

EPIBLEMA Hübn.

- E. scopoliana** Haw. Sherwood Forest, occasionally (*Brameld*). Mansfield district, frequent (*Daws*).
- E. cana** Haw. Worksop (*Houghton*). Mansfield district, frequent (*Daws*). Nottingham, in garden, 26. vi. 1901.
- E. expallidana** Haw. Worksop district (*Houghton*).
- E. trigeminana** Steph. Worksop, 1904 (*Lady Robinson*).
- E. tedella** Clerck. Sherwood Forest, common (*Brameld*).
- E. subocellana** Don. Sherwood Forest, rare (*Brameld*). Treswell Wood, 25. v. 1901 (*Thornley*). Owthorpe, 6. vi.

1914 (*Saunt*). Epperstone Park, 19. v. 1901; Foss-road, Widmerpool, 1. vi. 1901.

E. penkleriana Fisch. Sherwood Forest, common (*Brameld*). Treswell Wood, 5. ix. 1900, one example (*Thornley*).

E. ophthalmicana Hübn. Oxtou Bogs; Langford Moor (*Saunt*).

E. solandriana L. Sherwood Forest, occasionally (*Brameld*). Sherwood Forest near Edwinstowe, 18. vii. 1901 (*Thornley* and *Carr*). Stapleford (*Dawson*).

E. sordidana Hb. Edwinstowe, 3. viii. 1914 (*Saunt*).

E. bilunana Haw. Sherwood Forest, rare (*Brameld*). Clumber Park, July 1894 (*Lady Robinson*). Nottingham Forest, 24. vi. 1914 (*Saunt*).

E. similana Hübn. Sherwood Forest, occasionally (*Brameld*). Worksop, 14. viii. 1900, etc. (*Houghton*).

E. tripunctana Fab. Sherwood Forest, frequent (*Brameld*). Park House gardens, Worksop, 29. vi. 1894; Clumber Park (*Lady Robinson*). South Leverton, very common in vicarage garden in June and July; North Leverton, 27. v. 1901 (*Thornley*). Stapleford (*Dawson*). Nottingham, in garden, 26. vi. 1901; Bunny, 15. vi. 1901.

E. pflugiana Haw. Sherwood Forest, occasionally (*Brameld*). Worksop district (*Houghton*). Langford Moor, 25. viii. 1913 (*Saunt*).

E. luctuosana Dup. South Leverton. July 1900; Treswell Wood, 7. v. 1900 (*Thornley*). Sherwood Forest near Edwinstowe, June 1912 (*L. A. Carr*).

E. brunnichiana Froel. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*). North Leverton, 27. v. 1901; Treswell; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Nottingham, 12. vii. 1913 (*Saunt*).

GRAPHOLITHA Tr.

G. woeberiana Schiff. Clumber Park, 20. vi. 1894 (*Lady Robinson*). Mansfield district, frequent (*Daws*). Chilwell, 18. vi. 1901 (*Pearson*). Nottingham, in garden, common, 1—30. vi., 13. vii., 1901, etc.

G. nigricana Steph. South Leverton, amongst strawberries, 15. vi. 1901 (*Thornley*).

- G. ulicetana** Haw. (*G. succedana* Froel., var. *ulicetana*). Sherwood Forest, common (*Brameld*). Clarborough, very common on the Retford road flying about furze bushes; near Caddow Wood, North Leverton, common among furze (*Thornley*). Mansfield district, frequent (*Daws*). Sutton near Retford, 29. v. 1901; Widmerpool, 1. vi. 1901.
- G. microgrammana** Gn. Bulwell, 22. viii. 1914 (*Saunt*).
- G. coniferana** Ratzb. Notts. (precise locality unknown).
- G. perlepidana** Haw. North Leverton, abundant amongst furze, 15. v. 1901 (*Thornley*). Bramcote, 17. v. 1901.
- G. janthinana** Dup. Worksop, 1901 (*Houghton*).

PAMENE Hübn.

- P. argyrana** Hübn. Clumber Park, 18. v. 1894 (*Lady Robinson*). Treswell Wood, 1. vi. 1901 (*Thornley*). Strelley, several specimens at rest on a tree trunk, 24. v. 1901.
- P. splendidulana** Gn. Clumber, 1902 (*Lady Robinson*). Clarborough near Retford, 4. vi. 1901 (*Thornley*).
- P. spiniana** Dup. Sherwood Forest, rare (*Brameld*).
- P. populana** Fab. Worksop, 1905 (*Lady Robinson*).
- P. regiana** Zell. Park House gardens, Worksop, 30. vi. 1894 (*Lady Robinson*). South Leverton, on sycamore trunk in vicarage garden, 1. vi. 1901 (*Thornley*). Nottingham, frequent in gardens, etc., in June and July.
- P. nitidana** Fab. Clumber, 1902 (*Lady Robinson*). Clarborough near Retford, 4. vi. 1901 (*Thornley*).
- P. rhediella** Clerck. North Leverton, 15. v. 1901; South Leverton, common about the end of May flying about hedges in the sunshine (*Thornley*). Park House gardens, Worksop, 1910-11 (*Lady Robinson*).

TMETOCERA Led.

- T. ocellana** Fab. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). South Leverton, abundant, 24. vii. 1901 (*Thornley*). Nottingham, in garden, July 2, 5, 13, 1901, etc.; Cotgrave, 5. viii. 1901.

CARPOCAPSA Tr.

- C. pomonella** L. Sherwood Forest, occasionally (*Brameld*). South Leverton, not uncommon some years in vicarage

garden (*Thornley*). Mansfield district, frequent (*Daws*). Nottingham, 24. vi. 1914 (*Saunt*).

ANCYLIS Hübn.

- A. lundana** Fab. Sherwood Forest, twice taken (*Brameld*). Clumber Park, 12. vi. 1894 (*Lady Robinson*). Worksop (*Houghton*). South Leverton, common in hedges, end of May; Treswell Wood, 9. vi. 1900, 25. v. 1901 (*Thornley*). Epperstone Park and fields adjoining, 19. v. 1901; Strelley, 24. v. 1901.
- A. mitterbacheriana** Schiff. Clumber Park, 23. v.—14. vi. 1894 (*Lady Robinson*). Treswell Wood, 9. viii. 1901 (*Thornley*). Epperstone Park, 19. v. 1901.
- A. laetana** Fab. Clumber Park, 20. vi. 1894 (*Lady Robinson*).

RHOPOBOTA Led.

- R. naevana** Hübn. Sherwood Forest, common (*Brameld*). Nottingham, in garden, 30. vii. 1901; bred from pupae found on *Ulmus montanus* at Widmerpool, June 1901.

DICHRORAMPHA Guen.

- D. petiverella** L. Sherwood Forest, common (*Brameld*).
- D. plumbagana** Tr. Clarborough near Retford, 4. vi. 1901 (*Thornley*).
- D. acuminatana** Zell. Worksop, 1901 (*Houghton*).

LIPOPTYCHA Led.

- L. plumbana** Scop. Worksop (*Houghton*). Widmerpool, 1. vi. 1901.

GLYPHIPTERYGIDAE.

CHOREUTINAE.

CHOREUTIS Hübn.

- C. myllerana** Fab. Sherwood Forest, frequent (*Brameld*).

SIMAETHIS Leach.

- S. pariana** Clerck. Mansfield district, frequent (*Daws*).

S. fabriciana L. (*S. oxyacanthella* L.). Abundant. Sherwood Forest, abundant (*Brameld*). Worksop district, bred from larvae on nettles (*Lady Robinson*). South Leverton, abundant from summer to late autumn; Treswell Wood, common (*Thornley*). Mansfield district, frequent (*Daws*). Strelley, 24. v.; Widmerpool, 1. vi.; Southwell and Gonalston, 8. vi.; Bunny, 15. vi.; Chilwell, 5. vii.—all 1901 (*Carr*). Radcliffe-on-Trent, 27. v.—12. vi. 1912-13 (*Robinson*). Stapleford, 24. v. 1914 (*Saunt*).

GLYPHIPTERYGINAE.

GLYPHIPTERYX Hübner.

G. fuscoviridella Haw. Sherwood Forest, occasionally (*Brameld*). Clumber Park (*Lady Robinson*). South Leverton, common in corner of hayfield, flying in bright sunshine, 10. vi. 1900 (*Thornley*). Sutton near Retford, 29. v. 1901; Bulwell Forest, Nottingham, 9. vi. 1901.

G. forsterella Fab. Mansfield district, frequent (*Daws*).

G. fischeriella Zell. Osberton near Worksop; Treswell (*Lady Robinson*). South Leverton, 3. vi. 1900 (*Thornley*). Babworth near Retford, 29. v. 1901.

YPONOMEUTIDAE.

YPONOMEUTINAE.

YPONOMEUTA Latr.

Y. plumbellus Schiff. Sherwood Forest, frequent (*Brameld*). Worksop (*Houghton*).

Y. padellus L. A destructive pest. Sherwood Forest, abundant (*Brameld*). South Leverton, some years the nests of caterpillars are very common on hedges and fruit trees; Retford, hedge by canal, nests abundant, 1901; North Leverton, nests of larvae abundant, 1901 (*Thornley*). Mansfield district (*Daws*). Stapleford, common (*Dawson*). Thorney; Southwell; Kingston-upon-Soar. Excessively abundant, and a very troublesome pest in many parts of Nottingham and district: the apple-trees in gardens and orchards are often defoliated by the larvae. In 1912—14 the moths occurred in thousands in my garden and in other gardens in the district.

Y. evonymellus L. Sherwood Forest, common (*Brameld*). Worksop, 1900 (*Lady Robinson*). Mansfield district, frequent (*Daws*).

SWAMMERDAMIA Hübn.

- S. combinella** Hübn. Sherwood Forest, rare (*Brameld*). South Leverton, one in 1889 and another beaten from hawthorn hedge, 8. vi. 1900 (*Thornley*).
- S. caesiella** Hübn. Sherwood Forest, rare (*Brameld*).
- S. pyrella** Vill. Sherwood Forest, common (*Brameld*). Worksop, 17. v. 1902 (*Lady Robinson*). North Leverton, 18. v. 1901 (*Thornley*). Nottingham, in garden, 16. v. 1901; very abundant on hawthorn hedges in the outskirts of the city, 27. v. 1902; Bramcote, 17. v. 1901.

PRAYS Hübn.

- P. curtisellus** Don. Sherwood Forest, common (*Brameld*). Park House gardens, Worksop, 25. vi. 1894 (*Lady Robinson*). North Leverton (*Thornley*).

ARGYRESTHINAE.

ARGYRESTHIA Hübn.

- A. conjugella** Zell. Worksop, 1900 (*Lady Robinson*).
- A. mendica** Haw. Sherwood Forest, rare (*Brameld*).
- A. glaucinella** Zell. Treswell Wood near Retford, 27. vi. 1901 (*Thornley*).
- A. semifusca** Haw. Sherwood Forest, frequent (*Brameld*). Clumber Park (*Lady Robinson*).
- A. spiniella** Zell. South Leverton, common (*Thornley*).
- A. albistria** Haw. Sherwood Forest, twice taken (*Brameld*). South Leverton, common on hedges in July (*Thornley*).
- A. ephippella** Fab. Worksop, 1901 (*Houghton*).
- A. nitidella** Fab. Sherwood Forest, common (*Brameld*). South Leverton, 24. vii. 1901; Nottingham, emerging from bark of cherry tree, 24. vii. 1909 (*Thornley*). Bleasby, 12. vii. 1913; Cotgrave, 1. viii. 1914 (*Saunt*).
- A. semitestacella** Curt. Sherwood Forest, frequent (*Brameld*).
- A. aurulentella** Stt. Mansfield district (*Daws*).
- A. cornella** Fab. (*A. curvella* Steph.). Park House gardens, etc., Worksop (*Lady Robinson*). Nottingham, in garden, 26. vi. 1901 (*Carr*). Bleasby, 1913 (*Saunt*).

A. pygmaeella Hübn. Worksop, 1901 (*Houghton*).

A. goedartella L. Sherwood Forest, frequent (*Brameld*). Edwinstowe, common on birch, 18. vii. 1901 (*Thornley* and *Carr*). Clumber Park, 20. vii.—14. viii. 1894 (*Lady Robinson*). Mansfield district, frequent (*Daws*). Nottingham, in garden, 13—30. vii. 1901, type and var. *literella* Haw. (*Carr*). Mapperley, Nottingham, 3. viii. 1914 (*Thornley*). Langford Moor, 18. vii. 1913 (*Saunt*).

A. brockeella Hübn. Clumber, 29. vi. 1894 (*Lady Robinson*). Sherwood Forest near Ollerton, July 1912 (*Carr*). Epperstone Park, 14. vi. 1914 (*Saunt*).

A. dilectella Zell. Mansfield district (*Daws*).

A. praecolella Zell. Mansfield district (*Daws*).

A. arceuthina Zell. Mansfield district, frequent (*Daws*).

CEDESTIS Zell.

C. farinatella Dup. Clumber, 27. vi. 1902 (*Lady Robinson*). Mansfield district, frequent (*Daws*).

OCNEROSTOMA Zell.

O. piniariella Zell. Mansfield district, frequent (*Daws*).

PLUTELLIDAE.

PLUTELLINAE.

PLUTELLA Schrk.

P. porrectella L. Worksop (*Lady Robinson*). South Leverton, not uncommon in vicarage garden (*Thornley*). Mansfield, common in my garden : larvae on sweet rocket (*Daws*).

P. maculipennis Curt. (*P. cruciferarum* Zell.). Sherwood Forest, common (*Brameld*). Park House gardens, Worksop, 18. v.—13. vi. 1894 (*Lady Robinson*). South Leverton, not uncommon in vicarage garden, and sometimes abundant (*Thornley*). Nottingham and Chilwell, 5. vii. 1901 ; Nottingham, very common in 1914.

CEROSTOMA Latr.

C. vittella L. Sherwood Forest, local (*Brameld*). Worksop (*Houghton*).

- C. sequella** Clerck. Sherwood Forest, rare (*Brameld*).
- C. radiatella** Don. Sherwood Forest, common (*Brameld*). Clumber, 13—16. iii. 1894 (*Lady Robinson*). Common on oak in Thieves Wood near Mansfield (*Daws*).
- C. parenthesesella** L. (*C. costella* Fab.). Sherwood Forest, common (*Brameld*). Worksop district (*Lady Robinson*). Common on oak in Thieves Wood (*Daws*). Thorney, Aug. 1913 (*L. A. Carr*). Bulwell.
- C. scabrella** L. Worksop (*Houghton*).
- C. nemorella** L. Worksop (*Houghton*). Langford Moor, 12. vii. 1913 (*Saunt*).
- C. xylostella** L. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). South Leverton, once in vicarage garden; Treswell Wood, abundant amongst honeysuckle, 8. ix. 1897 (*Thornley*). Mansfield, common on honeysuckle (*Daws*). Langford Moor; Cotgrave (*Saunt*). Thorney, Aug. 1913 (*L. A. Carr*).

THERISTIS Hübn.

- T. mucronella** Scop. 'Var. *striata*. Mr. Daws of Mansfield, Notts., has sent me a beautiful specimen of this variety' (*J. W. Tutt, Ent. Rec.*, vol. i., p. 35, 1890).

ORTHOTAEIINAE.

ORTHOTAELIA Steph.

- O. sparganella** Thnbg. Sherwood Forest, local (*Brameld*).

GELECHIIDAE.

GELECHIINAE.

METZNERIA Zell.

- M. metzneriella** Stt. Shireoaks near Worksop (*Houghton*).

CHELARIA Haw.

- C. hübnerella** Don. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*).

BRYOTROPHA Hein.

- B. terrella** Hübn. Sherwood Forest, common (*Brameld*). Shireoaks (*Houghton*). Worksop (*Lady Robinson*). Bulwell Forest, Nottingham, 9. vi. 1901; Bunny, 15. vi. 1901.

- B. desertella** Dougl. Sherwood Forest, common (*Brameld*).
B. domestica Haw. Mansfield district, frequent (*Daws*).

GELECHIA Hübn.

- G. nigra** Haw. Mansfield district, frequent (*Daws*).
G. rhombella Schiff. Nottingham, in my garden on Mansfield Road, 30. vii. 1901.
G. distinctella Zell. Near Worksop, 1904 (*Lady Robinson*).
G. ericetella Hübn. Sherwood Forest, common (*Brameld*). Clumber, 1903 (*Lady Robinson*).
G. mulinella Zell. Oxtou, bred from larvae feeding on flowers of broom, July 1914 (*Saunt*).
G. diffinis Haw. Sherwood Forest, common (*Brameld*). Worksop (*Houghton*). Bulwell Forest, 9. vi. 1901.
G. scalella Scop. Clumber Park, etc., common, 3. v.—18. vi. 1894 (*Lady Robinson*). Treswell Wood, i. vi. 1901 (*Thornley*).
G. maculea Haw. Nottingham, 27. v. 1901.
G. humeralis Zell. Sherwood Forest, rare (*Brameld*).
G. proximella Hübn. Clumber, 25. v.—29. vi. 1894 (*Lady Robinson*).
G. luculella Hübn. Sherwood Forest, rare (*Brameld*). Clumber (*Lady Robinson*). South Leverton, on oak, 16. v. 1901, etc.; Treswell Wood, 25. v. 1901, etc., not uncommon on oak trunks (*Thornley*).

TACHYPTILIA Hein.

- T. populella** Clerck. Sherwood Forest, frequent (*Brameld*). Worksop district (*Houghton*). Treswell Wood, 16. viii. 1901 (*Thornley*).

XYSTOPHORA Hein.

- X. atrella** Haw. Worksop, 1901 (*Houghton*).
X. unicolorella Dup. (*X. immaculatella* Dougl.). Mansfield district, common (*Daws*).

ANACAMPSIS Curt.

- A. vorticella** Scop. Worksop, 1901 (*Houghton*).

EPITHECTIS Meyr.

E. mouffetella Schiff. Sherwood Forest, rare (*Brameld*).

RECURVARIA Haw.

R. leucatella Clerck. Sherwood Forest, rare (*Brameld*).

R. nanella Hübn. Osberton near Worksop, 1903 (*Houghton*).

STENOLECHIA Meyr.

S. gemmella L. Sherwood Forest, rare (*Brameld*).

CHRY SOPORA Clem.

C. stipella Hübn., var. *naeviferella* Dup. Sherwood Forest, rare (*Brameld*).

BRACHMIA Hübn.

B. rufescens Haw. Sherwood Forest, rare (*Brameld*).

SOPHRONIA Hübn.

S. semicostella Hübn. (*S. parenthesesella* Haw.). Sherwood Forest, rare (*Brameld*).

ANARSIA Zell.

A. spartiella Schrk. Worksop district (*Houghton*).

BLASTOBASINAE.

ENDROSIS Hübn.

E. lacteella Schiff. (*E. fenestrella* Stt.). Common and generally distributed, both in houses and at large.

OECOPHORINAE.

DASYSTOMA Curt.

D. salicella Hübn. South Leverton (*Thornley*). Bilsthorpe, 13. iv. 1902; Bulwell Forest, Nottingham, 21. iv. 1901.

CHIMABACHE Hübn.

C. phryganella Hübn. Sherwood Forest, common (*Brameld*).

- C. fagella** Fab. Sherwood Forest, common (*Brameld*). Worksop district, very common and in great variety, some examples being almost black : larvae found on oak and sloe ; 21. iii.—6. iv. 1894 (*Lady Robinson*). South Leverton, not uncommon in April (*Thornley*). Common in Thieves Wood, both light and dark varieties (*Daws*). Langford Moor ; Epperstone Park ; Oxtun ; Bulwell Forest (*Saunt*). Gedling and other places about Nottingham.

SEMIOSCOPIUS Hübner.

- S. avellanella** Hübner. Sherwood Forest, common in March (*Lady Robinson*). Mansfield district, frequent (*Daws*).

EPIGRAPHIA Steph.

- E. steinkellneriana** Schiff. Mansfield district, rare (*Daws*).

PSECADIA Hübner.

- P. funerella** Fab. Epperstone Park, one specimen, 19. v. 1901.

DEPRESSARIA Haw.

- D. costosa** Haw. Sherwood Forest, frequent (*Brameld*).
- D. flavella** Hübner. (*D. liturella* Schiff.). Sherwood Forest, common (*Brameld*). South Leverton, 24. vii. 1901 (*Thornley*). Chilwell, 20. vii. 1901 (*Pearson*). Calverton, 1. viii. 1914 (*Saunt*).
- D. umbellana** Steph. Mansfield district, common (*Daws*).
- D. assimilella** Tr. Worksop ; Clumber Park (*Lady Robinson*).
- D. arenella** Schiff. Sherwood Forest, common (*Brameld*). Worksop, 1. x. 1900 (*Houghton*). South Leverton, in vicarage, 20. v. 1900, 23. ii. 1901 (*Thornley*). Stapleford (*Dawson*).
- D. propinquella** Tr. Sherwood Forest, occasionally (*Brameld*).
- D. subpropinquella** Stt. Mansfield district, common (*Daws*).
- D. yeatiana** Fab. Sherwood Forest, rare (*Brameld*). South Leverton, 20. v. 1900 (*Thornley*).
- D. alstroemeriana** Clerck. Sherwood Forest, occasionally (*Brameld*). Shireoaks (*Lady Robinson*). Chilwell, 16. v. 1901 (*Pearson*). Nottingham (*Saunt*). Stapleford (*Dawson*).

- D. liturella** Hübn. Shireoaks near Worksop; Clumber Park (*Lady Robinson*). Stapleford (*Dawson*).
- D. applana** Fab. Sherwood Forest, common (*Brameld*). Park House gardens, etc., Worksop, common, 28. ii. 1893 (*Lady Robinson*). South Leverton, in vicarage throughout the winter: coming to light in very early spring (*Thornley*). Nottingham, 14. x. 1911 (*Saunt*).
- D. ciliella** Stt. Mansfield district, common (*Daws*).
- D. angelicella** Hübn. Sherwood Forest, rare (*Brameld*). Worksop (*Houghton*). Treswell (*Thornley*). Nottingham, 20. viii. 1914 (*Saunt*).
- D. depressella** Hübn. Mansfield district, frequent (*Daws*).
- D. heracliiana** De G. Sherwood Forest, occasionally (*Brameld*). Park House gardens, Worksop, 19. iv. 1893 (*Lady Robinson*). South Leverton, 15. v. 1900, 3. v. 1901 (*Thornley*). Mansfield district, frequent (*Daws*). Chilwell, 18. v. 1901 (*Pearson*). Mapperley, Nottingham, 13. ix. 1908; Barnstone; East Leake, 12. viii. 1914 (*Saunt*). Stapleford (*J. Dawson*). Sherwood, Nottingham, 19. iv. 1915.
- D. weirella** Stt. Worksop (*Houghton*). South Leverton, July 1901 (*Thornley*).

CARCINA Hübn.

- C. quercana** Fab. Sherwood Forest, very common (*Brameld*). Clumber Park, etc., Sherwood Forest, 14. viii. 1894 (*Lady Robinson*). Edwinstowe, 18. vii. 1901 (*Thornley* and *Carr*). South Leverton, not uncommon on oak in July (*Thornley*). Langford Moor, 28. vii. 1912 (*Saunt*). Stapleford (*Dawson*). Nottingham, 2. viii. 1908; Kingston-upon-Soar, 6. viii. 1908 (*Thornley*).

HARPELLA Schrk.

- H. geoffrella** L. Mansfield, on honeysuckle (*Daws*).
- H. bractella** L. Worksop, one specimen taken in the town, 1901 (*Houghton*).

OECOPHORA Latr.

- O. sulphurella** Fab. Common. Sherwood Forest, frequent (*Brameld*). Clumber Park, etc. (*Lady Robinson*). South Leverton, common; Treswell Wood, 25. v. 1901 (*Thornley*). Mansfield district, frequent (*Daws*). Epperstone Park, 19. v. 1901; Bulwell Forest, 12. v. 1912; Nottingham, rather common in gardens in May.

BORKHAUSENIA Hübn.

- B. pseudopretella** Stt. Sherwood Forest, occasionally (*Brameld*). Worksop (*Lady Robinson*). South Leverton, common in outhouses (*Thornley*). Mansfield district, frequent (*Daws*). Nottingham, a common household pest.
- B. lambdella** Don. Sherwood Forest, occasionally (*Brameld*).

ELACHISTIDAE.

SCYTHRIDINAE.

EPRMENIA Hübn.

- E. chaerophyllella** Goeze. Sherwood Forest, rare (*Brameld*). Fenton near Sturton-le-Steeple, flying in sunshine, 10. iv. 1901 (*Thornley*).

MOMPHINAE.

CATAPLECTICA Wisghm.

- C. fulviguttella** Zell. Worksop district (*Houghton*). South Leverton; Treswell Wood; June—Aug. 1901 (*Thornley*).

BATRACHEDRA Stt.

- B. pinicolella** Dup. Worksop district, 19. vii. 1902 (*Lady Robinson*).

BLASTODACNA Wck.

- B. hellerella** Dup. Nottingham, in my garden on Mansfield road, 2. vii. 1901 (*Carr*). Shireoaks (*Houghton*).

MOMPHA Hübn.

- M. raschkiella** Zell. Osberton near Worksop, 1903 (*Lady Robinson*).
- M. fulvescens** Haw. (*M. epilobiella* Schrk.). Has been taken in Notts. but I cannot ascertain the exact locality.
- M. ochraceella** Curt. Chilwell, 9. vii. 1901 (*Pearson*).

SPULERIA Hofm.

- S. aurifrontella** Hübn. Sherwood Forest, frequent (*Brameld*). Worksop (*Houghton*). North and South Leverton, some-

times very common in hedges; Newark, 30. v. 1908; Mapperley, Nottingham (*Thornley*). Mansfield, 1. vi. 1913 (*Saunt*). Stapleford (*Dawson*). East Leake, common, 25. v. 1913.

PSACAPHORA H.-S.

P. schranckella Hübn. Mansfield district, frequent (*Daws*).

HELIOZELINAE.

HELIOZELA H.-S.

H. sericiella Haw. Clumber Park, 19. v. 1902 (*Lady Robinson*).

COLEOPHORINAE.

COLEOPHORA Hübn.

C. laricella Hübn. Recorded for Nottinghamshire, but exact locality not stated.

C. lutipennella Zell. Sherwood Forest, frequent (*Brameld*). Worksop and Clumber, 27. vi. 1902 (*Lady Robinson*). Burton Joyce (*Saunt*).

C. limosipennella Dup. Shireoaks near Worksop, 1901 (*Lady Robinson*, *Houghton*).

C. olivacella Stt. Sherwood Forest, rare (*Brameld*).

C. gryphipennella Bouché. Taken in the county, but precise locality unknown.

C. fuscadinella Zell. Worksop, 16. vii. 1902 (*Lady Robinson*).

C. nigricella Steph. Sherwood Forest, rare (*Brameld*). Worksop, 10—20. vii. 1902 (*Lady Robinson*).

C. albitarsella Zell. Sherwood Forest, rare (*Brameld*). South Leverton, July 1900 (*Thornley*).

C. alcyonipennella Koll. Worksop (*Houghton*).

C. spissicornis Haw. (*C. fabriciella* Vill.). Mansfield district, frequent (*Daws*).

C. discordella Zell. Worksop (*Houghton*). Shireoaks (*Lady Robinson*).

C. saturatella Stt. Sherwood Forest, occasionally (*Brameld*).

C. albicosta Haw. Epperstone Park, 19. v. 1901.

- C. palliatella** Zinek. Sherwood Forest, rare (*Brameld*). Worksop, 1902 (*Lady Robinson*).
- C. lineolea** Haw. Adbolton near Nottingham, 27. vi. 1913.
- C. caespititiella** Zell. Sherwood Forest, common (*Brameld*).
- C. adjunctella** Hodgk. Mansfield district, frequent (*Daws*).
- C. virgaureae** Stt. Sherwood Forest, rare (*Brameld*).

ELACHISTINAE.

ELACHISTA Tr.

- E. apicipunctella** Stt. Clumber Park, 20. vi. 1902 (*Lady Robinson*). Nottingham, in garden, 7. vi. 1901.
- E. albifrontella** Hübn. Sherwood Forest, common (*Brameld*).
- E. nigrella** Haw. South Leverton, 22. v. 1900, etc., common (*Thornley*).
- E. cerusella** Hübn. Sherwood Forest, rare (*Brameld*). Nottingham Forest, 24. vi. 1914 (*Saunt*).
- E. rufocinerea** Haw. Sherwood Forest, common (*Brameld*). Worksop (*Lady Robinson*). North and South Leverton and Treswell, abundant in May (*Thornley*). Lambley, 17. v. 1913; Bradmore, May 1914 (*Saunt*). Nottingham, common in my garden, 16—27. v.; Bramcote, 17. v.; Beauvale Woods, 25. v.—all 1901.
- E. triatomea** Haw. Worksop (*Houghton*).
- E. argentella** Clerck. Sherwood Forest, common (*Brameld*). North and South Leverton and Welham near Retford, common, May and June, 1900-1 (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford (*Dawson*). Keyworth, 16. v. 1914 (*Saunt*). West Bridgford, 18. vi. 1914 (*Robinson*). Elkesley and Sutton near Retford, 29. v. 1901; Widmerpool, 1. vi. 1901.
- E. subalbidella** Schläg. Windmill lane, North Leverton, 24. v. 1901 (*Thornley*).

GRACILARIIDAE.

GRACILARIINAE.

GRACILARIA Haw.

- G. alchimiella** Scop. Sherwood Forest, frequent (*Brameld*). Clumber, 21. v.—14. vi. 1894 (*Lady Robinson*). Treswell

Wood, 15. vi. 1901 (*Thornley*). Mansfield district, frequent (*Daws*). Trowell (*Dawson*). Lowdham, 11. vi. 1901; Bulwell.

G. elongella L. Sherwood Forest, rare (*Brameld*). Worksop district (*Lady Robinson*, *Houghton*).

G. tringipennella Zell. Worksop district (*Houghton*).

G. syringella Fab. Sherwood Forest, occasionally (*Brameld*). Clumber, 31. v. 1894 (*Lady Robinson*). South Leverton, common on lilac; Treswell Wood, 25. v. 1901 (*Thornley*). Epperstone Park (*Saunt*). Nottingham, common: larvae feeding on lilac and privet.

G. auroguttella Steph. Clarborough near Retford, 30. iv. 1901; Treswell Wood, 16. v. 1901 (*Thornley*).

ORNIX Tr.

O. anglicella Stt. Sherwood Forest, frequent (*Brameld*). Nottingham, 16. v.; Bramcote, 17. v.—1901.

O. avellanella Stt. Sherwood Forest, rare (*Brameld*). North Leverton, 24. v. 1901; Treswell Wood, common (*Thornley*).

O. torquillella Zell. Sherwood Forest, rare (*Brameld*).

O. betulæ Stt. Sherwood Forest, frequent (*Brameld*).

LITHOCOLLETINAE.

LITHOCOLLETIS Hübn.

L. roboris Zell. Clumber Park (*Lady Robinson*).

L. cramerella Fab. Sherwood Forest, common (*Brameld*). South Leverton, on oak, 31. v. 1900; Treswell Wood, common, 16. v. 1901; North Leverton, 24. v. 1901 (*Thornley*). Bramcote, 17. v.; Epperstone Park, 19. v.; Beauvale Woods, 25. v.—all 1901.

L. tenella Zell. Treswell Wood, 16. v. 1901 (*Thornley*).

L. heegeriella Zell. Clumber Park (*Lady Robinson*).

L. alniella Zell. (*L. alnifoliella* Dup.). Sherwood Forest, common (*Brameld*).

L. ulmifoliella Hübn. Clumber Park (*Lady Robinson*).

L. cavella Zell. Clumber Park (*Lady Robinson*).

- L. salicicolella** Sircom. Clarbrough, 17. v. 1901 (*Thornley*).
L. pomifoliella Zell. (*L. oryacanthae* Frey). Sherwood Forest, rare (*Brameld*). Nottingham, in garden, 16. v.; Bramcote, 17. v.—1901.
L. faginella Zell. Sherwood Forest, rare (*Brameld*).
L. quercifoliella Zell. Sherwood Forest, common (*Brameld*). Clumber Park (*Lady Robinson*). South Leverton; Treswell Wood, not uncommon on oaks, 16. v.—1. vi. 1901 (*Thornley*). Nottingham, 16. v.; Epperstone Park, 19. v.—1901.
L. messaniella Zell. Sherwood Forest, common (*Brameld*). Worksop, on *Quercus ilex* (*Lady Robinson*). Mapperley, Nottingham (*Thornley*).
L. nicellii Stt. South Leverton, beaten from *Corylus*, 3. vi. 1900; Treswell Wood (*Thornley*).

TISCHERIA Zell.

- T. complanella** Hübn. Clumber Park, June 12—22 (*Lady Robinson*). Nottingham, May 1914 (*Saunt*).

LYONETIIDAE.

LYONETIINAE.

LYONETIA Hübn.

- L. clerkella** L. Sherwood Forest, rare (*Brameld*). Common at Worksop (*Lady Robinson*).

PHYLLOCNISTINAE.

CEMIOSTOMA Zell.

- C. spartifoliella** Hb. Nottingham, rather common on *Cytisus scoparius* in gardens.
C. laburnella Stt. South Leverton, common about laburnum trees in vicarage garden; Gotham, laburnum trees in rectory garden withered up by a severe attack of the larvae, 1908 (*Thornley*). Mansfield cemetery, very common (*Daws*). Abundant on laburnum in and around Nottingham.

BUCCULATRIX Zell.

- B. nigricomella** Zell. (*B. aurimaculella* Stt.). Worksop, 1903 (*Lady Robinson*). North Leverton, 24. v. 1901 (*Thornley*).

NEPTICULIDAE.

TRIFURCULA Zell.

T. immundella Zell. Clumber Park, 1903 (*Lady Robinson*).

NEPTICULA Zell.

N. anomalella Goeze. South Leverton, occasionally (*Thornley*).

N. argentipedella Zell. Worksop district, 7. vii. 1902 (*Lady Robinson*).

N. subbimaculella Haw. Clumber, 19. vi. 1902 (*Lady Robinson*). South Leverton, on oak trunk in vicarage garden, 3. vi. 1900, etc.; Treswell Wood, not uncommon on oak trunks, 25. v. 1901 (*Thornley*).

TALAEPORIDAE.

TALAEPORIA Hübn.

T. tubulosa Retz. (*T. pseudobombycella* Hübn.). Clumber Park, 23. vi. 1894 (*Lady Robinson*).

SOLENOBIA Zell.

S. inconspicuella Stt. Clumber Park (*Lady Robinson*).

TINEIDAE.

OCHSENHEIMERIINAE.

OCHSENHEIMERIA Hübn.

O. birdella Curt. Worksop district (*Houghton*). Aldercar Wood, Newstead; Langford Moor; Aug. 1914.

TINEINAE.

NARYCIA Steph.

N. monilifera Geoffr. (*N. melanella* Haw.). Clumber, 24. vi. 1902 (*Lady Robinson*).

SCARDIA Tr.

S. boleti Fab. Mansfield district, larvae often common in fungi (*Daws*).

. MONOPIS Hübn.

- M. fenestratella** Heyd. Mansfield district, frequent (*Daws*).
M. rusticella Hübn. Sherwood Forest, common (*Brameld*).
 Worksop; Clumber; May 25--June 20 (*Lady Robinson*).
 South Leverton, common in vicarage garden and outhouses,
 27. v. 1901, etc.; Treswell Wood, 9. vi. 1900 (*Thornley*).
 Langford Moor, 25. v. 1913 (*Saunt*). Epperstone Park, 19.
 v. 1901; Nottingham, vi.—vii. 1914.

TRICHOPHAGA Rag.

- T. tapetzella** L. Sherwood Forest, common (*Brameld*).
 Worksop (*Lady Robinson*). South Leverton, too common
 in houses (*Thornley*). Mansfield, very common (*Daws*).

TINEA L.

- T. fulvimitrella** Sodof. Clumber, rare (*Brameld*). 'I have
 taken about half-a-dozen specimens of this rare species in
 Clumber Park, June 18—27' (*Lady Robinson*).
T. arcella Fab. Sherwood Forest, rare (*Brameld*). South
 Leverton, one example about 1888 (*Thornley*).
T. corticella Curt. Worksop district (*Lady Robinson*). Sher-
 wood Forest near Edwinstowe, 18. vii. 1901 (*Thornley* and
Carr).
T. granella L. Sherwood Forest, common (*Brameld*). South
 Leverton, May 1900 (*Thornley*).
T. cloacella Haw. Sherwood Forest, common (*Brameld*).
 Worksop (*Houghton*). South Leverton, vi. 1901 (*Thornley*).
 Nottingham, common in garden, 7. vi.—2. vii. 1901;
 Southwell, 8. vi. 1901.
 var. *ruricolella* Stt. Sherwood Forest, occasionally (*Brameld*).
T. fuscipunctella Haw. Sherwood Forest, rare (*Brameld*).
 Chilwell, 11. vii. 1901 (*Pearson*).
T. pellionella L. South Leverton, in house, 3. vi. 1901
 (*Thornley*). Nottingham, in houses.
T. pallescentella Stt. Sherwood Forest, common (*Brameld*).
 Worksop district (*Houghton*).
T. lapella Hübn. Sherwood Forest, frequent (*Brameld*).
 Worksop (*Houghton*). South Leverton, not uncommon in
 vicarage garden in June, flying about hedges at dusk
 (*Thornley*). Nottingham.

- T. semifulvella** Haw. Sherwood Forest, twice taken (*Brameld*). Clumber Park, etc., fairly common, 18.—23. vi. 1894 (*Lady Robinson*).

TINEOLA H.-S.

- T. biselliella** Hummel. Sherwood Forest, frequent (*Brameld*). Worksop district (*Houghton*). Mansfield district, frequent (*Daws*). Nottingham, July 1914 (*Saunt*).

INCURVARIA Haw.

- I. luzella** Hübn. Osberton near Worksop; Treswell near Retford (*Lady Robinson*).

- I. rubiella** Bjerk. South Leverton, about raspberry bushes in vicarage garden, 10. vi. 1900 (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford, 1913 (*Dawson*).

- I. capitella** Clerck. Bred freely from currant shoots at Kingstons-upon-Soar (*Thornley*).

- I. muscalella** Fab. Common. Sherwood Forest, common (*Brameld*). Ollerton, 15. v. 1901 (*Becher*). Clumber (*Lady Robinson*). South Leverton, common in May flying about hedges in the sunshine (*Thornley*). North Muskham near Newark, abundant, flying along hawthorn hedges, 12. v. 1901; Bramcote, 17. v. 1901; Bagthorpe, Nottingham, common, 27. v. 1902 (*Carr*). Bradmore, 13. v. 1913; Calverton, 3. v. 1914 (*Saunt*).

- I. pectinea** Haw. Plentiful near the Major Oak, Sherwood Forest, flying in the sunshine round birch trees, 19. iv. 1893 (*Lady Robinson*).

NEMOPHORA Hübn.

- N. swammerdammella** L. Sherwood Forest, common (*Brameld*). Clumber, 8—21. v. 1894 (*Lady Robinson*). Worksop (*Houghton*). Ollerton, 15. v. 1901 (*Becher*). North and South Leverton and Treswell Wood, common (*Thornley*). Mansfield district, frequent (*Daws*). Trowell, 8. vi. 1913; Epperstone Park, 17. v. 1914 (*Saunt*).

- N. schwarziella** Zell. Sherwood Forest, common (*Brameld*). Epperstone Park, rather common, 19. v. 1901; Widmerpool, 1. vi. 1901 (*Carr*). Newstead, 18. v. 1912; Langford Moor, 25. v. 1913 (*Saunt*). Trowell (*Dawson*).

ADELINAE.

ADELA Latr.

- A. viridella** Scop. Sherwood Forest, common (*Brameld*). Worksop; Clumber Park; etc., 10—23. v. 1894 (*Lady Robinson*). Wellow Park, 25. v. 1901 (*Becher*). Near Mansfield, very common, 19. v. 1860 (*Brameld*). Common in Thieves Wood (*Daws*). South Leverton, at rhubarb flowers in vicarage garden, 2. vi. 1899; Treswell Wood, 25. v. 1901 (*Thornley*). Mansfield, 1. vi. 1913; Oxtan Bogs; Epperstone Park; Trowell; Newstead (*Saunt*). West Leake Hills, abundant, 17-27. v. 1913-4.
- A. degeerella** L. Sherwood Forest, local (*Brameld*). Common in Thieves Wood near Mansfield (*Daws*). Oxtan Bogs; Trowell, 15. vi. 1913 (*Saunt*).
- A. rufimitrella** Scop. Sherwood Forest, local (*Brameld*). South Leverton, 26. v. 1900 (*Thornley*). Mansfield district, frequent (*Daws*). Stapleford, 24. v. 1914 (*Saunt*). Papplewick, 1. vi. 1914 (*Robinson*). Epperstone Park, 19. v. 1901.
- A. fibulella** Fab. Treswell Wood, 1903 (*Lady Robinson*).

MICROPTERYGIDAE.

ERIOCRANIA Zell.

- E. subpurpurella** Haw. Sherwood Forest, common (*Brameld*). Clumber Park, 23. iv. 1894 (*Lady Robinson*). Treswell Wood, flying commonly in sunshine, 4. v. 1901 (*Thornley*).
- E. unimaculella** Zett. Clumber Park, 31. iii. 1902 (*Lady Robinson*).
- E. semipurpurella** Steph. Clumber Park, 31. iii. 1902 (*Lady Robinson*).
- E. sangii** Wood. Clumber Park, 1903 (*Lady Robinson*).

MICROPTERYX Hübn. (*Eriocephala* Curt.).

- M. thunbergella** Fab. Treswell Wood near Retford, 16. v. 1901, flying commonly in bright sunshine (*Thornley*).
- M. seppella** Fab. Clumber Park, 1902 (*Lady Robinson*).
- M. calthella** L. Sherwood Forest, rare (*Brameld*). Shireoaks (*Lady Robinson*). Treswell Wood, swarming in buttercups, 7. v. 1900, etc.; North Leverton, 24. v. 1901 (*Thornley*). West Drayton near Retford, 29. v. 1901; Widmerpool, 1. vi. 1901, common in buttercup and marsh-marigold flowers (*Carr*). Bulwell, 28. v. 1914 (*F. M. Robinson*).

COLEOPTERA (Beetles).

The Coleoptera constitute a very large and distinct Order of insects, easily distinguished by their firm integument, and especially by the hard and rigid character of the fore-wings (elytra) which meet in a straight median suture and are not used for flight, but serve as protective shields for the soft upper surface of the abdomen and for the thin membranous hind-wings which are folded together beneath the elytra and are alone used for flight. Although very many beetles can fly well the group is, on the whole, rather terrestrial than aerial, and in a very large number of species the wings are so much reduced as to render flight impossible. Well developed biting mandibles are present, the prothorax is large and free, and cerci or tail appendages are absent. The metamorphosis is complete. The larvae are usually grub-like, but they vary greatly in character, all stages from active campodeiform larvae to legless grubs occurring in the Order. The pupa is usually soft, exhibiting all the parts of the perfect insect.

The Order is one of enormous extent, the number of species already known being probably about 150,000. These are grouped into over 80 Families, the majority of which have British representatives. About 3,800 species occur in the British Islands, and of this number over 1,400 have been taken in Nottinghamshire, but doubtless many more still remain to be discovered.

Our knowledge of the Coleopterous fauna of the county is due mainly to the exertions of the Rev. Alfred Thornley, M.A., of Nottingham, and formerly vicar of South Leverton near Retford. Mr. Thornley has devoted many years to the study of the beetles of the county, and has generously placed all his records at the writer's disposal. The rich district of Sherwood Forest has been thoroughly investigated by Canon Fowler, the Rev. A. Matthews, and Messrs. E. C. Bedwell, W. G. Blatch, G. W. Chaster, H. Donisthorpe, J. Kidson Taylor, J. R. le B. Tomlin and others, who have discovered many rare species in this region, some of which have not occurred elsewhere in the British Isles. The neighbourhood of Nottingham has been successfully worked by Mr. W. E. Ryles and others, and Messrs. Stephen Pegler and J. T. Houghton have collected extensively in the Retford and Worksop districts respectively. Many good species have also been discovered in the extreme north of the county by the late Rev. T. C. B. Chamberlin.

The arrangement and nomenclature followed in this list are those of the *Catalogue of British Coleoptera* by Beare and Donisthorpe.

CICINDELIDAE.

CICINDELA L.

- C. campestris** L. Worksop (*Houghton*). Clumber (*Pegler*). Langford Moor near Newark, rather common (*Thornley* and *Carr*).

CARABIDAE.

CYCHRUS Fab.

- C. rostratus** L. Sherwood Forest (*Taylor*); near Edwinstowe, June 12—17, 1912 (*A. R. Jackson, M.D.*). Aspley Woods near Nottingham (*Ryles*). Nottingham; Epperstone; Langford Moor (*Saunt*).

CARABUS L.

- C. catenulatus** Scop. Worksop (*Houghton*). Sherwood Forest (*Freestone, Taylor*); near Edwinstowe, June 1912.
- C. nemoralis** Müll. Worksop (*Houghton*). Sherwood Forest (*Taylor*). Retford district, not uncommon (*Thornley*). North Wheatley; Barrow Hills, Everton, 8. viii. 1904 (*Chamberlin*). Nottingham and surrounding district, very common; Hucknall; Bingham (*Thornley* and *Carr*). Cotgrave (*Robinson*).
- C. violaceus** L. Worksop (*Houghton*). Sherwood Forest (*Taylor*). Retford district, moderately common; Nottingham; Kingston-upon-Soar (*Thornley*). North Wheatley (*Chamberlin*). West Leake; Nottingham and district, not uncommon.
- C. granulatus** L. Retford (*Pegler*). Rampton (*Chamberlin*). Beeston; Widmerpool (*Ryles*).
- C. monilis** Fab. Retford (*Pegler*). North Wheatley (*Chamberlin*). Treswell; Kingston-upon-Soar, 9. viii. 1912 (*Thornley*). Chilwell; Hoveringham (*Ryles*). Mapperley, Nottingham (*Saunt*). Trent-side, Nottingham, 2. v. 1913.

NOTIOPHILUS Dum.

- N. biguttatus** Fab. 'Apparently common throughout the county' (*Thornley* and *Ryles*). Worksop (*Houghton*). North Wheatley; Barrow Hills, Everton (*Chamberlin*). South Leverton, common (*Thornley*). Oxton (*Saunt*). Cotgrave (*Robinson*). Hucknall; Nottingham district, common.

- N. substriatus** Wat. Nottingham (*Ryles*). South Leverton, a few (*Thornley*).
- N. quadripunctatus** Dej. Nottingham, one specimen (*Ryles*). South Leverton, one (*Thornley*).
- N. aquaticus** L. Treswell near Retford (*Thornley*). South Wheatley, common (*Chamberlin*). West Bridgford, Nottingham.
- N. palustris** Duft. Sherwood Forest (*Taylor*). Retford ; South Leverton ; Treswell ; Kingston (*Thornley*). Nottingham ; Aspley Woods (*Ryles*).

LEISTUS Fröh.

- L. spinibarbis** Fab. Sherwood Forest (*Bedwell, Taylor, Tomlin, etc.*). Retford (*Pegler*). North Wheatley (*Chamberlin*). Nottingham.
- L. fulvibarbis** Dej. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). Nottingham (*Ryles*). Langford Moor (*Saunt*).
- L. ferrugineus** L. Sherwood Forest (*Bedwell, Taylor, Tomlin*). North Wheatley ; Barrow Hills, Everton (*Chamberlin*). Retford (*Pegler*). South Leverton ; Kingston-upon-Soar (*Thornley*). Near Newbound Mill, Teversall, 26. vi. 1913 (*Carr*). Nottingham (*Saunt*). Colwick ; Strelley ; Barton (*Ryles*).
- L. rufescens** Fab. Sherwood Forest (*Tomlin*). Warsop, 14. vii. 1913 (*Carr*). Nottingham ; Strelley (*Ryles*).

NEBRIA Latr.

- N. brevicollis** Fab. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Common in the Nottingham and Retford districts (*Ryles and Thornley*). North Wheatley (*Chamberlin*). Linby (*Carr*). Nottingham ; Radcliffe ; Bulwell Forest (*Robinson*). Kingston-upon-Soar (*Thornley*). Langford Moor (*Saunt*).
- N. gyllenhali** Schön. Nottingham, 1898 (*B. S. Dodd*).

BLETHISA Bon.

- B. multipunctata** L. Nottingham ; Beeston (*Ryles*). South Leverton, several (*Thornley*).

ELAPHRUS Fab.

- E. riparius** L. Nottingham district (*Ryles*). Moor Green reservoir, 15. vi. 1905, abundant (*Thornley* and *Carr*). Retford district (*Pegler*). Trent-bank, Cottam (*Thornley*).
- E. cupreus** Duft. Nottingham; Barton (*Ryles*). Bulwell (*F. Hind*). Beeston; South Leverton (*Thornley*). Retford (*Pegler*).

LORICERA Latr.

- L. pilicornis** Fab. Sherwood Forest (*Tomlin*). Wellow Park, 20. ix. 1911 (*Thornley* and *Carr*). Retford district; South Leverton; Rampton; Barrow Hills, Everton; Kingston (*Thornley*). North Wheatley (*Chamberlin*). Nottingham district; Linby.

CLIVINA Latr.

- C. fossor** L. Retford; South Leverton; Cottam; Rampton; Littleborough; common (*Thornley*). North Wheatley (*Chamberlin*). Langford Moor (*Saunt*). Common in the Nottingham district.
- C. collaris** Herbst. Nottingham (*Ryles*). Trent-bank, Rampton (*Chamberlin*).

BROSCUS Panz.

- B. cephalotes** L. A colony of this species was discovered in 1895 by Mr. S. Pegler in sandy ground at Ordsall, Retford. The locality is at least 40 miles from the sea (*Ent. Month. Mag.*, Oct. 1895, p. 240, and *Entom.*, 1895, p. 281).

BADISTER Clair.

- B. unipustulatus** Bon. Newark (*Fowler, Brit. Col.*, i. 30).
- B. bipustulatus** Fab. Rampton (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Graves Wood Quarry, Kirkby-in-Ashfield, under a stone, 11. vi. 1907.
- B. sodalis** Duft. Aspley, Nottingham, one specimen in a tuft of grass, 4. x. 1899 (*Ryles*).

LICINUS Latr.

- L. depressus** Payk. Sherwood Forest, a single specimen (*Ryles*). This is an interesting record as the species occurs chiefly on the chalk in the South of England, but is reported

from the Durham Coast, as very rare, by Bold, in Fowler's *Brit. Coleop.*, i. 31.

CHLAENIUS Bon.

- C. nigricornis** Fab. By the Trent at Nottingham, Beeston and Barton (*Ryles*).

ACUPALPUS Latr.

- A. dorsalis** Fab. Stapleford Common near Newark (*Fowler, Brit. Coleop.*, i. 38). This may be just over the county boundary, in Lincolnshire.

- A. exiguus** Dej., var. *luridus* Dej. South Leverton (*Pegler*).

- A. meridianus** L. Nottingham (*Ryles*).

- A. consputus** Duft. Sherwood Forest, one specimen at roots of grass, August 1903 (*Taylor*). 'Has been found abundantly near Newark by Mr. Hadfield' (*Dawson, Ent. Ann.* for 1856, p. 79).

BRADYCELLUS Er.

- B. placidus** Gyll. Treswell Wood (*Thornley*). Grove (*Pegler*).

- B. cognatus** Gyll. Treswell Wood, one example from moss, 21. iii. 1898 (*Thornley*). Retford district (*Pegler*).

- B. distinctus** Dej. Clumber (*Pegler*). By sweeping grass near Treswell Wood (*Thornley*).

- B. verbasci** Duft. Sherwood Forest (*Taylor*). Treswell Wood, not uncommon (*Thornley*). Nottingham (*Saunt*). Beeston, 13. viii. 1914 (*Robinson*).

- B. harpalinus** Dej. Worksop (*Houghton*). Retford district (*Thornley, Pegler*). Barrow Hills, Everton, 8—26. viii. 1904 (*Thornley and Chamberlin*).

- B. collaris** Payk. Sherwood Forest near Edwinstowe, 25. ix. 1913 (*Carr*).

- B. similis** Dej. Broadholme (*Pegler*).

HARPALUS Latr.

- H. punctatulus** Duft. Newark (*Fowler, Brit. Coleop.*, i. 45). Burton Joyce, several (*Ryles*). Kingston-upon-Soar, July 1914 (*Thornley*).

- H. azureus** Fab. Edwalton; Burton Joyce (*Ryles*).

- H. puncticollis** Payk. Nottingham district (*Ryles*).
- H. rufibarbis** Fab. Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, not uncommon; Trent bank, Rampton, 8. vi. 1906 (*Thornley*). Nottingham (*Saunt*). Cotgrave (*Robinson*).
- H. ruficornis** Fab. Common everywhere in the county.
- H. aeneus** Fab. Common throughout the county.
- H. rubripes** Duft. Barrow Hills, Everton, 27. viii. 1904 (*Chamberlin*). Sherwood Forest, one specimen, June 1905 (*Taylor*).
- H. discoideus** Fab. Barrow Hills, Everton, abundant, 26. viii. 1904 (*Thornley* and *Chamberlin*).
- H. latus** L. Barrow Hills, Everton, 8. and 26. viii. 1904 (*Thornley* and *Chamberlin*). North Wheatley; Pusto Hill near Wiseton (*Chamberlin*).
- H. rufimanus** Marsh. Sherwood Forest (*Ryles*). Sutton near Retford (*Pegler*). Barrow Hills, Everton, 26 and 27. viii. 1904 (*Thornley* and *Chamberlin*). Nottingham (*Carr*). Bulwell Forest, 14. v. 1913 (*Robinson*).

STOMIS Clair.

- S. pumicatus** Panz. Sherwood Forest (*Taylor*). Rampton (*Chamberlin*). South Leverton, not uncommon under stones; Kingston-upon-Soar (*Thornley*). Nottingham district, not uncommon (*Ryles*).

PLATYDERUS Steph.

- P. ruficollis** Marsh. Nottingham; Lambley; Clifton Grove (*Ryles* and others).

PTEROSTICHUS Er.

- P. cupreus** L. North and South Leverton, not uncommon; Clabrough (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Nottingham district, not uncommon (*Ryles*). Owthorpe (*Saunt*).
- P. versicolor** Stm. Nottingham district (*Ryles*). South Leverton (*Thornley*). Much less common than *P. cupreus*.
- P. madidus** Fab. Sherwood Forest (*Taylor*). Worksope (*Houghton*). North Wheatley (*Chamberlin*). South Lever-

ton, and Retford district generally, common; Kingston; Bingham (*Thornley*). Nottingham district, common (*Carr*). Epperstone (*Saunt*).

P. niger Schall. Creswell Crags; South Leverton, common (*Thornley*). Rampton (*Chamberlin*). Nottingham district, common; Lambley Dumble, 12. iv. 1912.

P. vulgaris L. Generally distributed and common.

P. nigrita Fab. Nottingham district, common in early spring in flood refuse by the Trent (*Ryles*). South Leverton and elsewhere in the Retford district, common (*Thornley*).

P. minor Gyll. Cottam near Retford (*Pegler*).

P. strenuus Panz. Sherwood Forest (*Tomlin*). South Leverton; Rampton (river bank), common (*Thornley*). Nottingham district, common (*Ryles*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*J. H. Woolley*). Radcliffe-on-Trent, 1. v. 1913 (*Robinson*).

P. diligens Sturm. Sherwood Forest (*Tomlin*). South Leverton (*Thornley*). Nottingham, one example by the Trent, March 1890 (*Ryles*). Worksop, several, 21. xii. 1913 (*H. E. Hodding*).

P. picimanus Duft. South Leverton, under pieces of wood in early spring; Kingston (*Thornley*). Trent-bank, Rampton (*Chamberlin*). Nottingham (*Ryles*).

P. inaequalis Marsh. Newark (*Fowler, Brit. Coleop.*, i. 67).

P. vernalis Panz. Worksop (*Houghton*). Rampton (*Chamberlin*). Nottingham; Beeston; Burton Joyce (*Ryles*). Radcliffe-on-Trent, 25. v. 1912 (*Thornley and Carr*).

P. striola Fab. Sherwood Forest (*Taylor*). Worksop (*Houghton*). North Wheatley (*Chamberlin*). South Leverton, not uncommon (*Thornley*). Nottingham district, not uncommon; Bingham (*Thornley and Carr*). Epperstone Park (*Saunt*).

AMARA Bon.

A. fulva De G. Nottingham (*Ryles, Robinson*). Barrow Hills, Everton, 26. viii. 1904 (*Thornley*).

A. apricaria Payk. Budby, Sherwood Forest, July 1899 (*J. Golding*). Worksop (*Houghton*). South Leverton and Retford district generally, common (*Thornley*). Rampton; Barrow Hills, Everton (*Chamberlin*). Nottingham district, common (*Ryles*).

- A. consularis** Duft. Nottingham (*Ryles, Saunt*).
- A. aulica** Panz. Nottingham (*Ryles*). Retford district; Gotham, 20. viii. 1914 (*Thornley*). Langford Moor (*Saunt*).
- A. bifrons** Gyll. Bulwell (*Ryles*).
- A. ovata** Fab. Nottingham (*Saunt*). West Bridgford (*Robinson*). Radcliffe-on-Trent; Hazleford (*Ryles*). Trent-side, Rampton (*Chamberlin*).
- A. similata** Gyll. Nottingham; Colwick; Hazleford (*Ryles*). Bulwell (*Dodd*). Retford (*Pegler*). South Leverton (*Thornley*). Rampton (*Chamberlin*). Park Drain, Misson, 22. ix. 1914 (*Thornley and Carr*).
- A. acuminata** Payk. South Leverton (*Thornley*). Nottingham.
- A. tibialis** Payk. Grove near Retford (*Pegler*). Cottam, 6. vii. 1901 (*E. Shaw*). Barrow Hills, Everton, common, 26. viii. 1904 (*Thornley and Chamberlin*).
- A. familiaris** Duft. Common and generally distributed.
- A. trivialis** Gyll. Sherwood Forest (*Taylor*). Worksop district (*Houghton*). Retford district, not very common; Barrow Hills, Everton, 26. viii. 1904 (*Thornley*). Stapleford (*Dawson*). Bingham, 1912, a black variety (*R. Pilling*). Nottingham and district, common.
- A. communis** Panz. Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton; Carlton near Nottingham (*Thornley*). Nottingham, frequent.
- A. plebeia** Gyll. South Leverton; Treswell Wood (*Thornley*). Worksop (*Hodding*). Retford (*Pegler*). Nottingham, not uncommon (*Ryles, Thornley, etc.*).

CALATHUS Bon.

- C. cisteloides** Panz. Common in the Nottingham and Retford districts (*Ryles, Thornley, etc.*). Worksop (*Houghton*). Barrow Hills, Everton (*Thornley and Chamberlin*). Langford Moor (*Saunt*). Wellow Park; West Leake; Kingston-upon-Soar (*Thornley and Carr*).
- C. fuscus** Fab. Babworth near Retford, one specimen in 1897 (*Pegler*). Sherwood Rise, Nottingham, one in 1909 (*Robinson*).
- C. flavipes** Fourcr. Nottingham (*Ryles*). Barrow Hills, Everton, 26. viii. 1904 (*Thornley and Chamberlin*).

C. melanocephalus L. Common in the Nottingham and Retford districts (*Ryles, Thornley*, etc.). Worksop (*Houghton*). North Wheatley; Barrow Hills, Everton (*Chamberlin*). Ollerton; Linby (*Carr*). Stapleford (*Dawson*).

C. micropterus Duft. Barrow Hills, Everton, 8. viii. 1904 (*Chamberlin*). Langford Moor (*Saunt*).

AMPHIGYNUS Hal.

A. piceus Marsh. Nottingham; Radcliffe-on-Trent; Sherwood Forest (*Ryles*). Barrow Hills, Everton, 4. ix. 1903; Kingston-upon-Soar (*Thornley*).

TAPHRIA Bon.

T. nivalis Panz. Sherwood Forest (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*).

PRISTONYCHUS Dej.

P. terricola Herbst. Nottingham, frequent. Retford (*Pegler*). Scofton near Worksop, in a stable (*Thornley*). North Wheatley (*Chamberlin*).

ANCHOMENUS Er.

A. angusticollis Fab. South Leverton; Treswell Wood; Cottam (*Thornley*). Rampton (*Chamberlin*). Worksop (*Houghton*). Aspley Woods, 18. v. 1912; Widmerpool, 12. viii. 1914, and common in the Nottingham district generally.

A. dorsalis Müll. Generally distributed and common.

A. albipes Fab. South Leverton; Rampton, common; Kingston (*Thornley*). Laneham (*Chamberlin*). Lambley (*Saunt*). Linby; Radcliffe-on-Trent; Nottingham district, common.

A. oblongus Fab. Worksop (*Ryles*).

A. livens Gyll. Trent-bank, Rampton (*Chamberlin*).

A. marginatus L. Newark (*Fowler, Entom.*, April 1881, p. 91). Nottingham; Barton; Beeston; Radcliffe-on-Trent (*Ryles*). Moor Green reservoir, Greasley, 15. vi. 1905 (*Thornley and Carr*). Trent-bank, Rampton (*Chamberlin*).

A. sexpunctatus L. Newark, near Stapleford Common (*Fowler, Brit. Coleop.*, i. 90). [May be out of the county].

A. parumpunctatus Fab. Retford district, common (*Thornley*). Laneham (*Chamberlin*). Nottingham district, not uncommon (*Ryles*).

- A. atratus** Duft. Barrow Hills, Everton (*Chamberlin*).
A. viduus Panz., var. *moestus* Duft. Nottingham district, not uncommon (*Ryles*). South Leverton, not uncommon in the Delph (*Thornley*).
A. micans Nic. Nottingham, not uncommon (*Ryles*). Rampton (*Chamberlin*). Radcliffe-on-Trent, 1. iv. 1914 (*Robinson*).
A. fuliginosus Panz. Nottingham, common (*Ryles*). Retford (*Pegler*).
A. piceus L. Beeston (*Ryles*).
A. puellus Dej. Colwick; Nottingham, not uncommon in early spring by the Trent-side (*Ryles*).

OLISTHOPUS Dej.

- O. rotundatus** Payk. Sherwood Forest (*Tomlin*). South Leverton, once only (*Thornley*). Nottingham (*Ryles*). King-upon-Soar, from tufts of grass, 29. iii. 1912 (*J. H. Woolley*).

BEMBIDIUM Latr.

- B. rufescens** Guér. Nottingham (*Ryles*). Treswell, 8. x. 1898, under bark of pines (*Thornley*). Cottam (*Pegler*). Laneham (*Chamberlin*).
B. quinquestriatum Gyll. South Leverton, one (*Thornley*).
B. obtusum Sturm. Nottingham (*Ryles*). South Leverton, common (*Thornley*). Trent-bank, Rampton (*Chamberlin*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*).
B. guttula Fab. Nottingham and Retford districts, common (*Ryles* and *Thornley*). West Burton (*Chamberlin*). Linby (*Carr*). Stoke Bardolph, 11. v. 1911 (*Robinson*). Kingston, in tufts of grass, 29. iii. 1912 (*Woolley*).
B. mannerheimi Sahl. Common in early spring in flood refuse by the Trent, Nottingham (*Ryles*). Flood refuse by the Trent, Laneham, 19. iii. 1906 (*Chamberlin*).
B. biguttatum Fab. Nottingham district, not common (*Ryles*). Trent-bank, Rampton, 18. vii. 1899, and Littleborough (*Thornley*). Trent-bank, Laneham and Rampton, 19. iii. 1906 (*Chamberlin*). Worksop, 21. xii. 1913 (*Hodding*).
B. riparium Ol. Nottingham (*Ryles*).

- B. aeneum** Germ. Nottingham, not uncommon (*Ryles*). Common on Trent-bank at Cottam (*Thornley*). Laneham (*Chamberlin*).
- B. clarki** Daws. Moor Green reservoir, Greasley, 15. vi. 1905 (*Thornley and Carr*).
- B. doris** Panz. 'Taken plentifully near Newark by Mr. Hadfield' (*Dawson, Ent. Ann.*, 1856, p. 81). It is strange that nothing has since been seen of this well-marked species.
- B. normannum** Dej. Trent-bank, Rampton, May and June, 1906 (*Thornley and Chamberlin*).
- B. gilvipes** Sturm. Nottingham district, common (*Ryles*). South Leverton ; Cottam ; Rampton ; Littleborough (*Thornley*).
- B. lampros** Herbst. Common in the Nottingham and Retford districts (*Ryles, Thornley*, etc.). Worksop (*Houghton*). North Wheatley (*Chamberlin*). Stoke Bardolph, 11. v. 1911 (*Robinson*). Radcliffe-on-Trent, 25. v. 1912.
- var. *celere* Fab. Sherwood Forest (*Taylor*).
- B. tibiale** Duft. Thurgarton (*Ryles*).
- B. decorum** Panz. South Leverton (*Thornley*). Burton Joyce ; Radcliffe-on-Trent (*Ryles*).
- B. nitidulum** Marsh. Trent-bank, Cottam, 14. vii. 1899 (*Thornley*). Grove near Retford (*Pegler*). Thurgarton (*Ryles*). Moor Green reservoir, Greasley, 15. vi. 1905 (*Thornley and Carr*).
- B. stomoides** Dej. Banks of the Trent, Cottam, Rampton, Littleborough and West Burton ; it is best found at the roots of long grass (*Alopecurus* sp.) close to the water's edge, and is easily confused with the common *B. littorale* when running fast (*Thornley*).
- B. quadriguttatum** Fab. Retford (*Pegler*). Nottingham ; Beeston ; Clifton Grove (*Ryles*).
- B. quadrimaculatum** L. Sherwood Forest (*Taylor*). South Leverton ; Walkeringham (*Thornley*). Littleborough (*Chamberlin*). Nottingham (*Ryles, Dodd*).
- B. lunatum** Duft. This fine species is not uncommon in the same localities as *B. stomoides*, especially at Cottam (*Thornley*).
- B. femoratum** Sturm. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Clumber (*Pegler*). Rampton, common on the

river bank (*Thornley*). West Burton ; Elkesley (*Chamberlin*). Nottingham, common (*Ryles*).

B. littorale Ol. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Nottingham and Retford districts, common (*Ryles*, *Thornley*, etc.). Rampton and Littleborough, on Trent-bank (*Thornley* and *Chamberlin*). Stoke Bardolph, 11. v. 1911 (*Robinson*). Radcliffe-on-Trent, 25. v. 1912.

B. fluviatile Dej. Nottingham and Colwick (*Ryles*). Newark (*Fowler*). Crow Park (*Pegler*). Trent-bank, Rampton (*Chamberlin*).

B. punctulatum Drap. Colwick ; Beeston ; Barton (*Ryles*). Trent-bank, Rampton (*Chamberlin*).

B. flammulatum Clair. Nottingham, not uncommon (*Ryles*). Moor Green reservoir, Greasley, 15. vi. 1905 (*Thornley* and *Carr*). West Burton (*Pegler*). Trent-bank, Rampton (*Chamberlin*).

TACHYPUS Lac.

T. flavipes L. Nottingham (*Ryles* and others). River-bank, Cottam, 14. vii. 1899 (*Thornley*) ; Littleborough (*Pegler*). West Burton (*Chamberlin*).

TRECHUS Clair.

T. discus Fab. Trent-bank opposite Gainsborough (*Pegler*). Trent-bank, Newark (*Fowler*). Nottingham.

T. micros Herbst. Retford ; Cottam (*Pegler*).

T. minutus Fab. Common in the Nottingham, Worksop and Retford districts (*Ryles*, *Thornley* and others). Barrow Hills, Everton (*Chamberlin*). Linby ; Lambley Dumble (*Carr*). Kingston-upon-Soar, 29. iii. 1912 (*Woolley*).

T. obtusus Er. Beeston (*Ryles*).

T. secalis Payk. Nottingham (*Ryles*). Trent-bank, Rampton (*Chamberlin*).

PATROBUS Dej.

P. excavatus Payk. South Leverton, occasional ; Kingston-upon-Soar, Aug. 1911 (*Thornley*). Laneham ; Rampton (*Chamberlin*). Nottingham district (*Ryles*, *Dodd*, *Saunt*, etc.).

DEMETRIAS Bon.

- D. atricapillus** L. South Leverton, not uncommon in late summer (*Thornley*). Gamston near Retford (*Chamberlin*). Nottingham district, not uncommon (*Ryles*). Kingston-upon-Soar, from tufts of grass, 29. iii. 1912 (*Woolley*). Crow Wood Hill, West Leake, 8. ix. 1914.

DROMIUS Bon.

- D. linearis** Ol. Sherwood Forest (*Tomlin*); beaten from oak, June 1906 (*Taylor*); near Edwinstowe, 25. ix. 1913 (*Carr*). Barrow Hills, Everton (*Chamberlin*). South Leverton, common; Kingston-upon-Soar (*Thornley*). Nottingham district, common (*Ryles*). Bingham and Car Colston, 11. iv. 1912 (*Thornley* and *Carr*).
- D. agilis** Fab. Sherwood Forest (*Taylor*). Nottingham (*Ryles*).
- D. meridionalis** Dej. Sherwood Forest (*Taylor*). Osberton near Worksop, under bark of lime trees, 28. iii. 1906 (*Houghton*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*).
- D. quadrimaculatus** L. Sherwood Forest (*Tomlin*, *Taylor*). Worksop; Osberton, 28. iii. 1906 (*Houghton*). South Leverton; Treswell; Kelham bridge near Newark: all under bark (*Thornley*). Nottingham district, not uncommon (*Ryles*). Goosedale Bog, Bestwood, 18. iii. 1906 (*Carr*). Epperstone Park, 6. ix. 1913 (*Thornley* and *Carr*). Langford Moor (*Saunt*).
- D. quadrinotatus** Panz. Nottingham (*Ryles*). South Leverton, not uncommon (*Thornley*).
- D. melanocephalus** Dej. Nottingham district (*Ryles*). Bingham, 11. iv. 1912 (*Thornley* and *Carr*). Sutton gravel-pit near Retford (*Thornley*). Pusto Hill, Wiseton (*Chamberlin*). Sherwood Forest near Edwinstowe, 25. ix. 1913.

BLECHRUS Mots.

- B. maurus** Sturm. Kingston-upon-Soar, from tuft of grass, 29. iii. 1912 (*J. H. Woolley*).

METABLETUS Schl.

- M. foveola** Gyll. Sherwood Forest (*Ryles*, *Taylor*). Clumber (*Pegler*). Barrow Hills, Everton, 15. vi. and 26. viii. 1904, common (*Thornley*). North Wheatley (*Chamberlin*). Bramcote (*Ryles*).

- M. truncatellus** L. Bramcote near Nottingham, one specimen (*Ryles*).

HALIPLIDAE.

BRYCHIUS Thoms.

- B. elevatus** Panz. Nottingham, in the Trent (*Ryles*). South Leverton, in Catchwater Drain; West Burton, in a little beck, 15. vi. 1899 (*Thornley*).

HALIPLUS Latr.

- H. flavicollis** Sturm. Barton in Fabis (*Ryles*).
H. fulvus Fab. South Leverton (*Thornley*).
H. ruficollis De G. Common in the Nottingham and Retford districts (*Ryles*, *Thornley*, etc.). Edwinstowe, 25. ix. 1913; Creswell Crags Lake, 22. ix. 1913.
H. fluviatilis Aub. Nottingham district (*Ryles*). Littleborough (*Thornley*). Edwinstowe, 25. ix. 1913.
H. lineatocollis Marsh. Nottingham (*Ryles*). South Leverton (*Thornley*). South Wheatley (*Chamberlin*). Edwinstowe, 25. ix. 1913; Lake at Creswell Crags, 22. ix. 1913; Park Drain, Misson, 25. ix. 1914.

DYTISCIDAE.

NOTERUS Clair.

- N. clavicornis** De G. Beeston (*Ryles*).
N. sparsus Marsh. Radcliffe-on-Trent (*Ryles*).

LACCOPHILUS Leach.

- L. interruptus** Panz. Nottingham (*Ryles*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*).
L. obscurus Panz. Nottingham (*Ryles*). South Leverton (*Thornley*).

HYPHYDRUS Ill.

- H. ovatus** L. Retford (*Pegler*). South Leverton; Cottam; Trent backwater at Thrumpton, 23. viii. 1904 (*Thornley*). Nottingham district (*Ryles*, *Dodd*, etc.).

COELAMBUS Thoms.

- C. versicolor** Schal. Pool by River Trent, Nottingham, 20. ix. 1913 (*Carr*). Old Trent, Newark, 8. v. 1909 (*Thornley*). Wheatley near Retford, July 1905 (*Chamberlin*).
- C. inaequalis** Fab. Nottingham (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*).
- C. confluens** Fab. North Wheatley, 21. ix. 1903 and July 1905 (*Chamberlin*).

DERONECTES Shp.

- D. assimilis** Payk. Edwinstowe (*Pegler*). Bunny (*Saunt*).
- D. depressus** Fab. Nottingham (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*). Bunny (*Saunt*).
- D. duodecimpustulatus** Fab. Edwinstowe (*Pegler*). Nottingham; Beeston (*Ryles*). Bunny (*Saunt*).

HYDROPORUS Clair.

- H. pictus** Fab. Grantham canal, Nottingham, 19. ix. 1913 (*Carr*). Radcliffe-on-Trent (*Ryles*).
- H. granularis** L. South Leverton (*Thornley*).
- H. lepidus** Ol. Retford (*Pegler*). Sand quarry near railway station, Worksop, 1908 (*Thornley*).
- H. rivalis** Gyll. Edwinstowe (*Pegler*).
- H. halensis** Fab. South Leverton, Nov. 1895, a single example from the Catchwater drain (*Thornley*).
- H. dorsalis** Fab. Nottingham (*Ryles*). South Leverton (*Thornley*). Retford (*Pegler*).
- H. lineatus** Fab. Grantham canal, Nottingham, 19. ix. 1913; pool by River Trent, Nottingham, 20. ix. 1913 (*Carr*). Retford (*Pegler*). South Leverton (*Thornley*).
- H. gyllenhali** Schiöd. South Leverton (*Thornley*).
- H. palustris** L. Nottingham (*Ryles*). Grantham canal, Nottingham, 19. ix. 1913; pool by River Trent, Nottingham, 20. ix. 1913; lake at Creswell Crag, 22. ix. 1913; Edwinstowe, 25. ix. 1913; Fiskerton, 25. vii. 1913 (*Carr*). Old Trent, Newark, 8. v. 1909; South Leverton (*Thornley*). Retford (*Pegler*). North Wheatley (*Chamberlin*).

- H. erythrocephalus** L. Retford (*Pegler*). South Leverton (*Thornley*).
- H. memnonius** Nic. Broadholme (*Pegler*).
- H. discretus** Fair. Littleborough, two specimens (*Thornley*).
- H. pubescens** Gyll. Nottingham; Beeston (*Ryles*). South Leverton (*Thornley*).
- H. planus** Fab. Nottingham (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Lake at Creswell Crags, 22. ix. 1913.
- H. lituratus** Fab. South Leverton (*Thornley*).
- H. marginatus** Duft. North Wheatley (*Chamberlin*).

AGABUS Leach.

- A. guttatus** Payk. South Leverton (*Thornley*). Carlton near Nottingham (*Saunt*).
- A. paludosus** Fab. Nottingham (*Ryles*). Basford (*Robinson*). Retford (*Pegler*). South Leverton; Littleborough (*Thornley*). Lake at Creswell Crags, 22. ix. 1913.
- A. didymus** Ol. New Basford (*Robinson*). Flawford near Plumtree (*Saunt*). Retford (*Pegler*). South Leverton, not uncommon (*Thornley*). North Wheatley (*Chamberlin*). Lake at Creswell Crags, 22. ix. 1913 (*Carr*). Oxtou, 25. ix. 1914 (*H. S. Holden*).
- A. nebulosus** Forst. Flawford and Carlton near Nottingham (*Saunt*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*).
- A. sturmi** Gyll. Nottingham (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*). Lake at Creswell Crags, 22. ix. 1913.
- A. chalconotus** Panz. South Leverton (*Thornley*). Retford; Broadholme (*Pegler*).
- A. bipustulatus** L. Worksop (*Houghton*). North Wheatley (*Chamberlin*). Kingston-upon-Soar, Aug. 1911 (*Thornley*).

PLATAMBUS Thoms.

- P. maculatus** L. Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton (*Thornley*). Nottingham (*Ryles*, *Saunt*). Carlton near Nottingham; Flawford (*Saunt*). Oxtou, 25. ix. 1914 (*H. S. Holden*).

ILYBIUS Er.

I. fuliginosus Fab. Worksop (*Houghton*). Edwinstowe, 25. ix. 1913; lake at Creswell Crags, 22. ix. 1913 (*Carr*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles, Saunt*). Carlton near Nottingham; Flawford near Plumtree (*Saunt*).

I. fenestratus Fab. Wollaton (*Ryles*).

I. ater De G. Nottingham (*Ryles*). South Leverton (*Thornley*).

I. obscurus Marsh. Beeston (*Ryles*). Trent-bank at Rampton (*Chamberlin*).

COLYMBETES Clair.

C. fuscus L. Nottingham (*Ryles*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*).

DYTISCUS L.

D. marginalis L. Nottingham (*Ryles*). Cinder-hill brickyard (*Carr*). Carlton near Nottingham (*Saunt*). Retford (*Pegler*). North Wheatley, one or two caught each year in same pond (*Chamberlin*). Worksop; South Leverton; Kingston, Aug. 1911; a ♂ caught walking amongst grass in lane at Kingston, 8. viii. 1912 (*Thornley*).

ACILIUS Leach.

A. sulcatus L. Nottingham (*Ryles*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar, Aug. 1911; several mud cocoons containing fully-developed insects were found on edge of pond at Kingston, Sept. 1901 (*Thornley*).

GYRINIDAE.

GYRINUS Geoff.

G. natator Scop. Nottingham district, common. Retford; South Leverton; Kingston-upon-Soar (*Thornley*). Wheatley district, abundant (*Chamberlin*).

G. marinus Gyll. Cossall, 1902; Grantham canal, Nottingham, 19. ix. 1913 (*Carr*). Thrumpton, 12. viii. 1912 (*Thornley*).

ORECTOCHILUS Lac.

- O. villosus** Müll. 'Has once in this neighbourhood [Nottingham] been taken abundantly The gentleman who took them informs me that on turning over a stone on the margin of the Trent he observed at least fifty specimens' (*Wm. Howitt, Book of the Seasons*, 1830). Nottingham, common in some parts of the Trent (*Ryles*).

HYDROPHILIDAE.**HYDROBIUS** Leach.

- H. fuscipes** L. Nottingham and Mansfield (*Saunt*). Trent-side, Nottingham, 2. v. 1913; lake at Creswell Crags, 22. ix. 1913 (*Carr*). North Wheatley (*Chamberlin*). South Leverton, common; Kingston-upon-Soar (*Thornley*).

CYMBIODYTA Bed.

- C. ovalis** Thoms. South Leverton; Cottam, 5. iii. 1898 (*Thornley*).

PARACYMUS Thoms.

- P. nigroaeneus** Fab. Cottam, in ditch in lane going from village towards river (*Thornley*).

ANACAENA Thoms.

- A. globulus** Payk. Nottingham (*Ryles*). South Leverton (*Thornley*). Lake at Creswell Crags. 22. ix. 1913.
- A. limbata** Fab. Nottingham district (*Ryles, Saunt*). North Wheatley (*Chamberlin*).

LACCOBIUS Er.

- L. sinuatus** Mots. Cinder-hill brickyard, 1902.
- L. minutus** L. Has occurred in the county but precise locality unknown.
- L. bipunctatus** Fab. Cossall, 1902.

CHAETARTHRIA Steph.

- C. seminulum** Payk. South Leverton, in the Delph (*Pegler*).

HELOPHORUS Fab.

- H. rugosus** Ol. Sherwood Forest (*Tomlin*). Creswell Crags (Notts. side), 22. ix. 1913.
- H. nubilus** Fab. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Creswell Crags (Notts. side), 22. ix. 1913.
- H. aquaticus** L. Sand quarry by station, Worksop; Retford; North and South Leverton (*Thornley*). West Burton (*Chamberlin*).
- H. dorsalis** Marsh. East Leake, 5. vii. 1911 (*Robinson*).
- H. aeneipennis** Thoms. Retford (*Pegler*) Finningley, 25. ix. 1914.
- H. brevipalpis** Bed. North and South Leverton; Littleborough; Kingston-upon-Soar (*Thornley*). North Wheatley; Hayton (*Chamberlin*). Trent-side, Nottingham, 2. v. 1913; lake at Creswell Crags, 22. ix. 1913; Edwinstowe, 25. ix. 1913 (*Carr*). East Leake, 5. vii. 1911 (*Robinson*).

HYDROCHUS Leach.

- H. elongatus** Schal. South Leverton (*Thornley*).

OCHTHEBIUS Leach.

- O. rufimarginatus** Steph. Radcliffe-on-Trent (*Ryles*).

HYDRAENA Kug.

- H. nigrita** Germ. South Leverton, 19. iii. 1898 (*Thornley*).

CYCLONOTUM Er.

- C. orbiculare** Fab. Beeston (*Ryles*). Clumber (*Pegler*).

SPHAERIDIUM Fab.

- S. scarabaeoides** L. Nottingham; Langford Moor (*Carr*). Beeston (*Robinson*). South Leverton, common; Kingston (*Thornley*). Worksop (*Houghton*). North Wheatley, common (*Chamberlin*).
- S. bipustulatum** Fab. Beeston (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*).
- var. *marginatum* Fab. South Leverton (*Thornley*). Nottingham (*Saunt*).

CERCYON Leach.

- C. haemorrhoidalis** Fab. Sherwood Forest (*Taylor, Tomlin, Donisthorpe*). South Leverton (*Thornley*). Nottingham (*Ryles*). Radcliffe-on-Trent, 14. iv. 1910; Beeston, 23. vi. 1910; Clifton, 21. iv. 1914 (*Robinson*).
- C. obsoletus** Gyll. Sherwood Forest (*Tomlin*).
- C. marinus** Thoms. North Wheatley (*Chamberlin*).
- C. flavipes** Fab. Sherwood Forest (*Tomlin*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Nottingham (*Ryles*). Radcliffe-on-Trent, 14. iv. 1910 (*Robinson*).
- C. lateralis** Marsh. Tuxford (*Pegler*).
- C. melanocephalus** L. Sherwood Forest (*Tomlin*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Nottingham; Aspley Woods, in moss, 4. x. 1899 (*Ryles*). Radcliffe-on-Trent, 14. iv. 1910; Beeston, 23. vi. 1910 (*Robinson*).
- C. unipunctatus** L. Nottingham (*Ryles*). Flying commonly in garden, Coppice Road, Nottingham, 15. iv. 1912; South Leverton (*Thornley*).
- C. quisquilius** L. Sherwood Forest (*Tomlin*). Retford (*Pegler*). Nottingham (*Ryles*). Sherwood, Nottingham, 3. v. 1914.
- C. nigriceps** Marsh. Nottingham (*Ryles*).
- C. analis** Payk. Nottingham (*Ryles, Thornley*). Worksop (*Houghton*). South Leverton (*Thornley*).
- C. lugubris** Payk. Beeston, in flood refuse (*Ryles*).

MEGASTERNUM Muls.

- M. boletophagum** Marsh. Sherwood Forest (*Taylor, Tomlin*). Gamston near Retford (*Chamberlin*). South Leverton (*Thornley*). Nottingham (*Ryles*). Gamston near Nottingham, 2. vii. 1914 (*Robinson*).

CRYPTOPLEURUM Muls.

- C. atomarium** Ol. Sherwood Forest (*Bedwell, Tomlin*). South Leverton, common (*Thornley*).

STAPHYLINIDAE.

ALEOCHARA Gr.

- A. fuscipes** Fab. Sherwood Forest (*Taylor, Tomlin*). Worksop (*Houghton*). Retford (*Pegler*). South Leverton, in

dead animals, common ; Kingston-upon-Soar (*Thornley*).
Nottingham (*Ryles*).

A. lata Gr. Sherwood Forest, in carrion, June 1906 (*Taylor*).

A. lanuginosa Gr. Sherwood Forest (*Tomlin*). Retford
(*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*,
Carr). Radcliffe-on-Trent, 14. iv. 1910 (*Robinson*).

A. moesta Gr. Sherwood Forest, in dead animals, October
1886 (*Blatch* and *Horner*). South Leverton (*Thornley*).

A. succicola Thoms. Sherwood Forest, in fungus, Oct. 1904
(*Taylor*).

A. moerens Gyll. Sherwood Forest, one specimen in fungus,
Oct. 1905 (*Taylor*).

A. nitida Gr. South Leverton (*Thornley*). Retford (*Pegler*).

A. morion Gr. Sherwood Forest (*Chaster*, *Tomlin*). South
Leverton, not uncommon (*Thornley*).

MICROGLOSSA Kr.

M. suturalis Sahl. South Leverton, abundant in damp hay-
stack refuse, 4. x. 1899 (*Thornley*).

M. pulla Gyll. Sherwood Forest (*Fowler*, *Brit. Coleop.*, ii. 24).

M. nidicola Fair. Abundant in nest of Sand Martin in bank of
River Trent, opposite Sneinton, Nottingham, 16. vii. 1912.

OXYPODA Man.

O. spectabilis Märk. Sherwood Forest, in carrion, Oct. 1886
(*Blatch* and *Horner*).

O. lividipennis Man. Sherwood Forest, in carrion, Oct. 1886
(*Blatch* and *Horner*); also taken in the Forest by J. Kidson
Taylor. Treswell (*Thornley*).

O. opaca Gr. Sherwood Forest (*Tomlin*).

O. alternans Gr. Sherwood Forest (*Taylor*, *Tomlin*). Clumber
(*Pegler*).

O. umbrata Gyll. Sherwood Forest, June 1889 (*Blatch*).

O. haemorrhoea Sahl. Sherwood Forest, under bark, Oct.
1886 (*Blatch* and *Horner*).

O. annularis Sahl. Sherwood Forest (*Chaster*); in same
locality, under bark, May 1905 (*Taylor*).

ISCHNOGLOSSA Kr.

I. prolixa Gr. Sherwood Forest, under bark, October 1905 (*Taylor*).

I. corticina Er. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 40).

OCYUSA Kr.

O. incrassata Muls. Sherwood Forest, under bark, October 1886 (*Blatch and Horner*).

O. picina Aubé. Clumber (*Pegler*).

PHLOEOPORA Er.

P. reptans Gr. Sherwood Forest (*Bedwell, Taylor, Tomlin*). Crow Wood Hill, West Leake, 15. iv. 1914 (*Thornley*).

P. corticalis Gr. Sherwood Forest (*Fowler, Chaster, Taylor, Tomlin*).

OCALEA Er.

O. castanea Er. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*).

ILYOBATES Kr.

I. nigricollis Payk. Sherwood Forest (*Chaster*).

CHILOPORA Kr.

C. longitarsis Er. Retford (*Pegler*).

MYRMEDONIA Er.

M. limbata Payk. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 56). South Leverton (*Thornley*).

DRUSILLA Leach.

D. canaliculata Fab. Sherwood Forest, among dead leaves, May 1905 (*Taylor*); taken there also by Tomlin. South Leverton, not uncommon under stones, by or with ants (*Thornley*). North Wheatley (*Chamberlin*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*). Bingham, 11. iv. 1912.

CALLICERUS Gr.

- C. rigidicornis** Er. Sherwood Forest (*Chaster*); also in same locality, 23. vi. 1907 (*Donisthorpe*).

ALIANITA Thoms.

- A. incana** Er. South Leverton, in the Delph (*Thornley*).

HOMALOTA Man.

- H. vicina** Steph. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton; Treswell; in moss and damp haystack refuse (*Thornley*).
- H. graminicola** Gr. Sherwood Forest (*Tomlin*).
- H. fungivora** Thoms. Sherwood Forest, in carrion and in straw heaps, Oct. 1886 (*Blatch* and *Horner*).
- H. picipes** Thoms. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 86).
- H. nigella** Er. South Leverton (*Thornley*).
- H. aequata** Er. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*). Taken in same locality by *Chaster* and *Tomlin*.
- H. linearis** Gr. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*).
- H. pilicornis** Thoms. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 89; *Blatch* and *Horner, E.M.M.*, Feb. 1887).
- H. circellaris** Gr. Sherwood Forest (*Taylor, Tomlin*). South Leverton (*Thornley*).
- H. immersa** Er. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*); in same locality (*Taylor*).
- H. cuspidata** Er. Sherwood Forest (*Bedwell, Taylor, Tomlin*).
- H. analis** Gr. Sherwood Forest (*Tomlin*). South Leverton, common (*Thornley*).
- H. validiuscula** Kr. Sherwood Forest, one specimen in dead leaves, Oct. 1905 (*Taylor*).
- H. depressa** Gyll. South Leverton, several on walls in vicarage yard (*Thornley*).
- H. aeneicollis** Sharp. Sherwood Forest, in fungi, Oct. 1886 (*Blatch* and *Horner*).

- H. xanthoptera** Steph. Sherwood Forest, in fungi and under bark of logs and stumps, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*). South Leverton (*Thornley*).
- H. euryptera** Steph. Sherwood Forest, at sap of oak, June 1906 (*Taylor*).
- H. trinotata** Kr. Sherwood Forest (*Taylor, Tomlin*). South Leverton, common in old hay (*Thornley*).
- H. xanthopus** Thoms. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch and Horner*).
- H. triangulum** Kr. Sherwood Forest, under bark, May 1905 (*Taylor*).
- H. fungicola** Thoms. Sherwood Forest (*Taylor*); in same locality, 23. vi. 1907 (*Donisthorpe*).
- H. ignobilis** Sharp. Sherwood Forest, in fungi, Oct. 1886 and June 1889 (*Blatch*).
- H. boletobia** Thoms. Sherwood Forest, in fungi, Oct. 1886 (*Blatch and Horner*).
- H. liturata** Steph. Sherwood Forest, in *Polyporus*, June 1889 (*Blatch*).
- H. humeralis** Kr. Sherwood Forest, in fungi, Oct. 1886 and June 1889 (*Blatch*); in same locality, under bark, May 1905 (*Taylor*).
- H. gagatina** Baud. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); in same locality (*Chaster*).
- H. divisa** Märk. Sherwood Forest, in dead animals, Oct. 1886 (*Blatch and Horner*).
- H. nigricornis** Thoms. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); in same locality, in fungus, Oct. 1905 (*Taylor*).
- H. ravilla** Er. Sherwood Forest, in carrion and in straw heaps, Oct. 1886 (*Blatch and Horner*).
- H. corvina** Thoms. Sherwood Forest, in dead animals and in straw heaps, Oct. 1886 (*Blatch and Horner*).
- H. sericea** Muls. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*). South Leverton (*Thornley*).
- H. subtilis** Scriba. Sherwood Forest (*Blatch*).

- H. indubia** Sharp. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*). Clifton near Nottingham, 21. iv. 1914 (*Robinson, teste J. J. Walker*).
- H. atricolor** Sharp. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*); abundant under elm bark (*Blatch*). Taken in same locality by Taylor.
- H. germana** Sharp. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*).
- H. celata** Er. Sherwood Forest, June 1889 (*Blatch*).
- H. canescens** Sharp. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*); in same locality, 1904 (*Chaster*).
- H. cauta** Er. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*).
- H. setigera** Sharp. Sherwood Forest.
- H. macrocera** Thoms. Sherwood Forest, June 1889 (*Blatch*).
- H. atramentaria** Gyll. Sherwood Forest (*Taylor, Tomlin*). South Leverton; Mapperley road, Nottingham, 19. iv. 1909 (*Thornley*).
- H. cadaverina** Bris. Sherwood Forest, June 1889 (*Blatch*).
- H. marcida** Er. Sherwood Forest, in fungi, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*).
- H. longicornis** Gr. Sherwood Forest (*Bedwell, Tomlin*). South Leverton (*Thornley*).
- H. sordida** Marsh. Sherwood Forest (*Taylor, Tomlin*). South Leverton, very common in damp bottom of haystack, 4. x. 1899 (*Thornley*).
- H. aterrima** Gr. South Leverton (*Thornley*).
- H. muscorum** Bris. Sherwood Forest, in fungi, October 1886 (*Blatch and Horner*); same locality, in extreme abundance on sappy stumps of recently felled oaks, June 1899 (*Blatch*); taken also by *Taylor*. South Leverton (*Thornley*).
- H. pilosiventris** Thoms. Sherwood Forest, under bark, *Blatch* (*Fowler, Brit. Coleop.*, ii. 137); in same locality on sappy stumps of recently felled oaks, June 1899 (*Blatch*).
- H. laticollis** Steph. Sherwood Forest, under bark, May 1905 (*Taylor*).
- H. fungi** Gr. Sherwood Forest, (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton; Kingston, 2. ix. 1909 (*Thornley*).

- H. cribrata** Kr. (?) Recorded, doubtfully, for Sherwood Forest by *Blatch* and *Horner*, *E.M.M.*, Feb. 1887.

FALAGRIA Steph.

- F. sulcata** Payk. South Leverton, in damp haystack refuse, 4. x. 1899 (*Thornley*).
F. obscura Gr. Sherwood Forest (*Tomlin*). South Leverton, under stones in company with ants; also in damp haystack refuse, Oct. 4, 1899 (*Thornley*). Bulcote (*Ryles*).

AUTALIA Steph.

- A. impressa** Ol. Sherwood Forest (*Taylor*, *Tomlin*).
A. rivularis Gr. Sherwood Forest (*Tomlin*).

ENCEPHALUS West.

- E. complicans** West. South Leverton, in moss (*Thornley*).

GYROPHAENA Man.

- G. affinis** Man. Sherwood Forest, in fungus, May 1905 (*Taylor*); in same locality (*Tomlin*).
G. gentilis Er. Sherwood Forest, in fungus, May 1905 (*Taylor*).
G. nana Payk. Sherwood Forest, in fungus, June 1906 (*Taylor*). Treswell Wood, common in fungi (*Thornley*).
G. fasciata Marsh. Sherwood Forest, Edwinstowe, in fungi, Sept. 1905 (*Tomlin*).
G. minima Er. Sherwood Forest, in fungus, May 1905 (*Taylor*). Taken in same locality by *Tomlin*.

AGARICOCCHARA Kr.

- A. laevicollis** Kr. Sherwood Forest, in fungi on old trees, Oct. 1886 (*Blatch* and *Horner*); in same locality (*Taylor*, *Tomlin*).

PLACUSA Er.

- P. pumilio** Gr. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*).
P. denticulata Sharp. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*).

EPIPEDA Muls.

E. plana Gyll. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 162).

LEPTUSA Kr.

L. fumida Er. Sherwood Forest (*Taylor, Tomlin*).

SIPALIA Rey.

S. ruficollis Er. Sherwood Forest, June 1889 (*Blatch*).

BOLITOCHARA Man.

B. lucida Gr. Sherwood Forest, in *Polyporus* on an old oak, June 1889 (*Blatch*). Sherwood Forest (*Taylor, Tomlin*).
Wellow Park, in fungi, 20. ix. 1911 (*Thornley and Carr*).

B. obliqua Er. Sherwood Forest (*Taylor, Tomlin*). In same locality, under bark, June 1907 (*Donisthorpe*).

HYGRONOMA Er.

H. dimidiata Gr. Clumber (*Pegler*).

OLIGOTA Man.

O. inflata Man. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*).

O. pusillima Gr. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*).

O. apicata Er. Sherwood Forest, in fungi on old trees, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor, Tomlin*); same locality, beaten out of faggots, June 1907 (*Donisthorpe*).

MYLLAENA Er.

M. fowleri Matth. Sherwood Forest, very rare, taken by Rev. A. Matthews (*Fowler, Brit. Coleop.*, ii. 178).

HYPOCYPTUS Man.

H. longicornis Payk. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*).

CONOSOMA Kr.

C. littoreum L. Sherwood Forest (*Chaster, Taylor*). Retford district (*Pegler*). Lowdham (*Ryles*).

- C. pubescens** Gr. Sherwood Forest (*Taylor, Tomlin*). South Leverton (*Thornley*). Retford district (*Pegler*).
C. immaculatum Steph. Sherwood Forest (*Chaster*).
C. lividum Er. Sherwood Forest (*Taylor*). South Leverton (*Thornley*). Retford (*Pegler*).

TACHYPORUS Gr.

- T. obtusus** L. Sherwood Forest (*Taylor, Tomlin*). North Wheatley (*Chamberlin*). Retford (*Pegler*). South Leverton (*Thornley*). Near Newbound Mill, Teversall, 26. vi. 1913 (*Carr*). Nottingham (*Saunt, Ryles*). Radcliffe-on-Trent, 1. v. 1913; Clifton, 21. iv. 1914; Stapleford, 13. viii. 1914 (*Robinson*).
 var. *nitidicollis* Steph. Sherwood Forest, 1871 (*J. R. Hardy*).
T. solutus Er. Sherwood Forest (*Taylor*); in same locality, June 1912 (*Dr. Randell Jackson*). South Leverton (*Thornley*). Gedling, 18. v. 1911; Radcliffe, 1. v. 1913 (*Robinson*).
T. pallidus Sharp. South Wheatley (*Chamberlin*).
T. chrysomelinus L. Sherwood Forest (*Taylor, Tomlin*). South Wheatley (*Chamberlin*). South Leverton (*Thornley*). Retford district (*Pegler*). Nottingham (*Ryles, Robinson*). Aspley, in moss, 4. x. 1899 (*Ryles*). West Leake, 14. vi. 1913; Car Colston, 11. iv. 1912 (*Thornley and Carr*). Radcliffe-on-Trent, 1. iv. 1914; Bulwell, 28. v. 1914; Strelley, 10. ix. 1914 (*Robinson*).
T. humerosus Er. Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton and Treswell, in moss (*Thornley*). Aspley, in moss, 4. x. 1899 (*Ryles*).
T. tersus Er. Sherwood Forest, in dead leaves, Oct. 1905 (*Taylor*).
T. hypnorum Fab. Universally distributed and common.
T. pusillus Gr. Sherwood Forest (*Taylor*). South Wheatley (*Chamberlin*). South Leverton, one in haystack refuse, 4. x. 1899 (*Thornley*). Nottingham (*Robinson*).
T. brunneus Fab. Sherwood Forest (*Tomlin*). South Leverton; Nottingham, 16. iv. 1912 (*Thornley*).

LAMPRINUS Heer.

- L. saginatus** Gr. South Leverton, one example in garden, 1895 (*Thornley*).

CILEA Duv.

- C. silphoides** L. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch and Horner*). South Leverton, flying near dung heap in early spring (*Thornley*). Nottingham (*Ryles*).

TACHINUS Gr.

- T. humeralis** Gr. Sherwood Forest (*Taylor, Tomlin*). Retford district (*Pegler*).
- T. proximus** Kr. Sherwood Forest, in dead jackdaw, June 1903 (*Taylor*).
- T. rufipes** De G. Sherwood Forest (*Tomlin*). Edwinstowe, Sept. 1909 (*Thornley*). Retford district (*Pegler*). South Wheatley (*Chamberlin*). Nottingham (*Ryles*). Kingston; Misson, 22. ix. 1914 (*Thornley and Carr*).
- T. subterraneus** L. Retford district, with var. *bicolor* Gr. (*Pegler*). South Leverton (*Thornley*).
- T. marginellus** Fab. Sherwood Forest (*Tomlin*). North Wheatley (*Chamberlin*). South Leverton, in dung (*Thornley*).
- T. laticollis** Gr. Sherwood Forest, one in fungus, Oct. 1905 (*Taylor*).
- T. collaris** Gr. South Leverton, in haystack refuse, etc., 4. x. 1899, etc. (*Thornley*). Nottingham (*Ryles, Saunt*).

MEGACRONUS Thoms.

- M. cingulatus** Man. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); June 1907, also under bark (*Taylor*); in rotten wood, July 1908 (*Donisthorpe*); also taken in same locality by E. C. Bedwell.
- M. analis** Payk. Edwinstowe, Sherwood Forest, Sept. 1909; South Leverton; West Leake, 15. iv. 1914 (*Thornley*). Retford district (*Pegler*). Linby (*Carr*). Beeston (*Ryles*).

BOLITOBIVS Steph.

- B. lunulatus** L. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). Treswell Wood; Kingston-upon-Soar, 2. ix. 1909 (*Thornley*).
- B. trinotatus** Er. Sherwood Forest (*Taylor, Tomlin*). Edwinstowe, Sept. 1909; Treswell Wood (*Thornley*). Retford district (*Pegler*). Gamston near Retford (*Chamberlin*). Beeston (*Ryles*).

B. exoletus Er. Sherwood Forest (*Taylor, Tomlin*).

B. pygmaeus Fab. Sherwood Forest (*Taylor, Tomlin*). Edwinstowe, Sept. 1909; Treswell Wood (*Thornley*). Retford district (*Pegler*).

MYCETOPORUS Man.

M. lucidus Er. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch and Horner*); one in dead leaves, Oct. 1905 (*Taylor*).

M. splendens Marsh. Sherwood Forest, among dead leaves, Oct. 1905 (*Taylor*).

M. punctus Gyll. Sherwood Forest, by sweeping, also out of faggots (*Fowler, Brit. Coleop.*, ii. 215).

M. lepidus Gr. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch and Horner*); taken in same locality by Chaster, Taylor and Tomlin.

M. longulus Man. Sherwood Forest (*Chaster*). Crow Wood Hill, West Leake, several specimens by sweeping, 14. vi. 1913 (*Thornley and Carr*).

M. nanus Er. I have a note of the occurrence of this species in Notts., but without precise locality.

M. angularis Rey. Sherwood Forest, by sweeping, July 1908 (*Donisthorpe*).

M. splendidus Gr. South Leverton (*Thornley*).

HABROCERUS Er.

H. capillaricornis Gr. Sherwood Forest, very abundant among dead holly leaves, October 1905 (*Taylor*). Colwick (*Ryles*).

TRICHOPHYA Man.

T. pilicornis Gyll. Sherwood Forest, in carrion, October 1886 (*Blatch and Horner*).

HETEROTHOPS Steph.

H. dissimilis Gr. Sherwood Forest, under bark, June 1906 (*Taylor*). South Leverton, in garden rubbish and haystack refuse in autumn (*Thornley*).

QUEDIUS Leach.

- Q. ventralis** Ahr. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 281).
- Q. lateralis** Gr. Sherwood Forest, taken by Blatch and Horner, Chaster, Taylor, Tomlin, etc.
- Q. mesomelinus** Marsh. Nottingham district (*Ryles*). Nottingham; Kingston; Bingham; South Leverton (*Thornley*). Worksop (*Houghton*).
var. *fageti* Thoms. Sherwood Forest (*Taylor*).
- Q. fulgidus** Fab. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 233). Barrow Hills, Everton, 8. viii. 1904 (*Chamberlin*).
- Q. puncticollis** Thoms. Sherwood Forest (*Fowler, Blatch and Horner, Taylor*).
- Q. cruentus** Ol. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*). Retford district (*Pegler*). Wheatley; Elkesley (*Chamberlin*).
- Q. xanthopus** Er. Sherwood Forest, under bark, and in rotten fungi on stumps, &c. Taken by Fowler, Blatch and Horner, Bedwell, Chaster, Donisthorpe, Taylor, Tomlin, etc.
- Q. variabilis** Heer. This unique example was taken in Sherwood Forest by Mr. Kidson Taylor in October 1904, in rotten fungus, in company with *Q. xanthopus* Er. (*E. A. Newbery in E.M.M.*, Sept. 1905, p. 197).
- Q. scitus** Gr. Sherwood Forest: taken by Mr. Kidson Taylor before 1869, and again nearly 40 years later; also by Blatch and Horner, under bark, in October 1886, and by Blatch in June 1889. Broadholme (*Pegler*).
- Q. cinctus** Payk. Sherwood Forest (*Taylor, Tomlin*). South Leverton, common (*Thornley*). Nottingham, on bank of Trent, 2. v. 1913 (*H. Mottram*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).
- Q. fuliginosus** Gr. Sherwood Forest near Ollerton, July 1912 (*Carr*); also taken in the Forest by Tomlin. Worksop (*Houghton*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Aspley near Nottingham, 4. x. 1899 (*Ryles*). Nottingham (*Saunt*).
- Q. tristis** Gr. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton,

- sparingly; Kingston-upon-Soar (*Thornley*). Bulwell (*Robinson*). Nottingham district, frequent.
- Q. molochinus** Gr. Sherwood Forest (*Tomlin*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton; Kingston (*Thornley*). Quarry Banks, Linby, April 1906.
- Q. nigriceps** Kr. Sherwood Forest, under bark, October 1886 (*Blatch* and *Horner*); taken also by Taylor. Near Edwinstowe, Sherwood Forest, June 1912 (*L. A. Carr*).
- Q. maurorufus** Gr. Retford district (*Pegler*). Gamston near Retford (*Chamberlin*). North and South Leverton (*Thornley*).
- Q. umbrinus** Er. Garden, Coppice Road, Nottingham, 10. v. 1912 (*Thornley*).
- Q. rufipes** Gr. Sherwood Forest (*Tomlin*). Nottingham district (*Ryles*). South Leverton, one in damp haystack refuse, 4. x. 1899 (*Thornley*).
- Q. semiaeneus** Steph. Sherwood Forest, in dead leaves, Oct. 1905 (*Taylor*). Nottingham (*Ryles*).
- Q. boops** Grav. Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton (*Thornley*). Southwell (*Ryles*).

CREOPHILUS Man.

- C. maxillosus** L. Sherwood Forest (*Taylor*, *Tomlin*). Worksop (*Houghton*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles*, *Dodd*). Nottingham, 6. vii. 1912; Hucknall Torkard (*Robinson*).

LEISTOTROPHUS Pert.

- L. nebulosus** Fab. Sherwood Forest near Edwinstowe, June 1912; Widmerpool, 20. iv. 1900 (*Carr*). Retford district (*Pegler*). South Leverton; Kingston (*Thornley*). Nottingham (*Ryles* and *Carr*).
- L. murinus** L. Kingston-upon-Soar, one specimen under a dead rabbit, Aug. 1901 (*Thornley*).

STAPHYLINUS L.

- S. pubescens** De G. Annesley Park, 19. iv. 1900 (*Carr*). South Leverton; Kingston-upon-Soar, under a dead rabbit, Aug. 1901, and in Aug. 1911 (*Thornley*).

- S. fulvipes** Scop. Sherwood Forest, under loose bark, June 1886 (*Blatch*); taken in same locality by Chaster, Tomlin, etc.
- S. stercorarius** Ol. Kingston-upon-Soar, one specimen under a dead rabbit, Aug. 1901, two in Aug. 1911, another 24. vii. 1912, and one in nest of *Myrmica rubra* under a block of gypsum, 5. viii. 1913 (*Thornley*).
- S. caesareus** Ceder. Edwinstowe, Sherwood Forest, one specimen, June 1912 (*L. A. Carr*).

OCYPUS Er.

- O. olens** Müll. Sherwood Forest (*Tomlin*). Worksop (*Houghton*). Retford (*Pegler*). Wheatley district, common (*Chamberlin*). South Leverton, fairly common; Kingston (*Thornley*). Radcliffe, 25. ix. 1913 (*Robinson*). Nottingham district, frequent.
- O. cyaneus** Payk. Sherwood Forest (*Rev. H. Matthews*). Newark, several specimens taken by Mr. Hadfield (*Fowler, Brit. Coleop.*, ii. 255).
- O. brunnipes** Fab. Sherwood Forest, one in dead beech leaves, June 1903 (*Taylor*). South Leverton; Treswell Wood; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles, Saunt*). Tollerton, 11. vii. 1911 (*Robinson*). Car Colston, 11. iv. 1912 (*Thornley and Carr*).
- O. cupreus** Rossi. Worksop (*Houghton*). Barrow Hills, Everton (*Chamberlin*). Retford district (*Pegler*). South Leverton (*Thornley*). Ollerton, 20. ix. 1911 and June 1914.
- O. ater** Gr. Retford (*Pegler*).
- O. morio** Gr. Nottingham (*Ryles*). Retford district (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton (*Thornley*). Langford Moor, 2. ix. 1911 (*Saunt*).
- O. compressus** Marsh. Nottingham (*Ryles*). South Leverton; Barrow Hills, Everton, 4. ix. 1903 (*Thornley*).

PHILONTHUS Curt.

- P. splendens** Fab. Nottingham (*Ryles*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*).
- P. intermedius** Bois. Retford (*Pegler*). Kingston-upon-Soar, Aug. 1911 (*Thornley*). Radcliffe-on-Trent, 31. iii. 1913 (*Robinson*).

- P. laminatus** Creutz. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles*). Cotgrave (*Robinson*). Park Drain, Misson, 22. ix. 1914.
- P. aeneus** Rossi. Sherwood Forest (*Taylor, Tomlin, Carr*). Worksop (*Houghton*). Retford (*Pegler*). South Leverton; Kingston (*Thornley*). Nottingham district, common; Bingham, 19. iv. 1912 (*Carr*). Hucknall Torkard, 1. vi. 1911 (*Robinson*).
- P. proximus** Kr. Sherwood Forest (*Chaster, Taylor, Tomlin*). South Leverton; Kingston; West Leake, 14. vi. 1913 (*Thornley*).
- P. addendus** Sharp. Sherwood Forest (*Blatch*).
- P. decorus** Gr. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton; Barrow Hills, Everton, 4. ix. 1903; Nottingham, 3. iv. 1913; Carlton near Nottingham, 22. iv. 1909 (*Thornley*). Nottingham (*Ryles*).
- P. politus** Fab. Sherwood Forest (*Tomlin*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Littleborough (*Thornley*). Langford Moor near Newark, 25. iii. 1913 (*Saunt*). Nottingham, common; Park Drain, Misson, 22. ix. 1914.
- P. varius** Gyll. Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). North Wheatley (*Chamberlin*). Nottingham, common; Park Drain, Misson, 22. ix. 1914.
- P. marginatus** Fab. Sherwood Forest (*Tomlin, Carr*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*). Crow Wood Hill, West Leake, 16. i. 1915.
- P. albipes** Gr. Sherwood Forest, one among dead leaves, Oct. 1905 (*Taylor*). South Leverton, once (*Thornley*).
- P. umbratilis** Gr. Radcliffe-on-Trent, 25. ix. 1913 (*Robinson*).
- P. cephalotes** Gr. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); taken also by Taylor. South Leverton (*Thornley*).
- P. fimetarius** Gr. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton, common in haystack refuse, 4. x. 1899 (*Thornley*). Nottingham (*Ryles*).
- P. sordidus** Gr. South Leverton, common in haystack refuse, 4. x. 1899; Kingston-upon-Soar (*Thornley*). Stapleford 13. viii. 1914 (*Robinson*).

- P. ebeninus** Gr. Garden at 'Mapperley Edge,' Sherwood, Nottingham, 14. v. 1914.
- P. sanguinolentus** Gr. Nottingham (*Ryles, Saunt*). South Leverton (*Thornley*).
- P. cruentatus** Gmel. Sherwood Forest (*Blatch, Tomlin*).
- P. varians** Payk. Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton; Barrow Hills, Everton, 4. ix. 1903; Kingston-upon-Soar (*Thornley*).
- P. ventralis** Gr. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 275). South Leverton, in manure heap (*Thornley*).
- P. splendidulus** Gr. Sherwood Forest, under bark, commonly, October 1886 (*Blatch and Horner*); taken also by Bedwell, Chaster, Donisthorpe, Fowler, Taylor, Tomlin, etc.
- P. trossulus** Nord. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton, very common in haystack refuse, 4. x. 1899 (*Thornley*).
- P. puella** Nord. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 281). Retford (*Pegler*). South Leverton (*Thornley*).

ACTOBIUS Fauv.

- A. cinerascens** Gr. South Leverton, once, amongst rubbish in vicarage garden (*Thornley*).

XANTHOLINUS Ser.

- X. glabratus** Gr. Sherwood Forest (*Tomlin*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles, Saunt*, etc.). Epperstone Park (*Saunt*).
- X. punctulatus** Payk. Sherwood Forest (*Blatch and Horner, Taylor, Tomlin*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Nottingham, 21. iv. 1912 (*Thornley*). Nottingham district (*Ryles, Dodd*). Kingston-upon-Soar (*Woolley*). Park Drain, Misson, 22. ix. 1914.
- X. ochraceus** Gyll. Sherwood Forest, in moss, October 1904 (*Taylor*). Kingston-upon-Soar, from tufts of grass, 29. iii. 1912 (*Woolley*).
- X. tricolor** Fab. Sherwood Forest, among dead leaves, Oct. 1905 (*Taylor*).
- X. linearis** Ol. Sherwood Forest (*Tomlin*); in fungus, June 1906 (*Taylor*). Retford (*Pegler*). North Wheatley

(*Chamberlin*). South Leverton, in haystack refuse, 4. x. 1899, etc. (*Thornley*). Nottingham (*Ryles and Thornley*). Clifton, 21. iv. 1914 (*Robinson*). West Leake, 9. viii. 1914; Aldercar Wood, Newstead, 18. viii. 1914.

LEPTACINUS Er.

- L. parumpunctatus** Gyll. South Leverton, in damp haystack refuse, 4. x. 1899 (*Thornley*).
L. linearis Gr. Sherwood Forest, in fungus, June 1906 (*Taylor*). South Leverton, several in damp haystack refuse, 4. x. 1899 (*Thornley*).

BAPTOLINUS Kr.

- B. alternans** Gr. Sherwood Forest (*Taylor, Tomlin*); also taken there by Dr. Randell Jackson, June 1912.

OTHIUS Steph.

- O. fulvipennis** Fab. Sherwood Forest (*Carr, Taylor, Tomlin*). Worksop, 15. v. 1914 (*Hodding*). Retford (*Pegler*). South Leverton, common (*Thornley*). Nottingham (*Ryles*). Aspley Woods, 18. v. 1912 (*Carr*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*).
O. laeviusculus Steph. Sherwood Forest (*Fowler, Tomlin*). North Collingham, 28. viii. 1918.
O. melanocephalus Gr. Sherwood Forest (*Tomlin*). Retford (*Pegler*). Welham near Retford (*Thornley*). Langford Moor, 14. viii. 1914 (*C. Morley*).
O. myrmecophilus Kies. Sherwood Forest (*Taylor, Tomlin*). Bramcote, Oct. 1899 (*Ryles*).

LATHROBIUM Gr.

- L. elongatum** L. Aspley near Nottingham (*Ryles*). South Leverton (*Thornley*).
L. boreale Hoch. Retford district (*Thornley*).
L. fulvipenne Gr. Sherwood Forest (*Tomlin*). Clumber Park (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton (*Thornley*). Nottingham; Aspley; Beeston (*Ryles*). Kingston-upon-Soar, 29. iii. 1912 (*Woolley*).
L. brunnipes Fab. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Beeston (*Ryles*).

L. longulum Gr. Beeston, 1898 (*Ryles*).

L. quadratum Payk. South Leverton, one specimen flying (*Thornley*).

STILICUS Latr.

S. rufipes Germ. Sherwood Forest, June 1889 (*Blatch*). Retford (*Pegler*). South Leverton, in haystack refuse, 4. x. 1899, etc. (*Thornley*).

S. orbiculatus Payk. Sherwood Forest, in carrion and in straw heaps, October 1886 (*Blatch* and *Horner*). Retford (*Pegler*).

S. affinis Er. Nottingham and Beeston, 1899 (*Ryles*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). Treswell Wood, 21. iii. 1898; South Leverton, in hot bed and in haystack refuse, abundant on October 4, 1899 (*Thornley*).

LITHOCHARIS Lac.

L. ochracea Gr. South Leverton, several specimens in haystack refuse, 4. x. 1899 (*Thornley*).

SUNIUS Steph.

S. angustatus Payk. Sherwood Forest (*Taylor*, *Tomlin*). South Leverton, in haystack refuse (*Thornley*).

STENUS Latr.

S. biguttatus L. Clumber Park; banks of River Trent, Cottam and Littleborough (*Pegler*).

S. guttula Müll. Nottingham (*Ryles*). South Leverton (*Thornley*). Gamston near Retford (*Pegler*).

S. bimaculatus Gyll. Radcliffe-on-Trent, May 1898 (*Ryles*). Trent-bank, Cottam (*Thornley*).

S. junco Fab. Nottingham; Beeston; Radcliffe (*Ryles*). Retford (*Pegler*). South Leverton (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Radcliffe-on-Trent, 1. iv. 1914 (*Robinson*).

S. speculator Lac. Sherwood Forest (*Taylor*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton, common; Treswell Wood, 29. v. 1899 (*Thornley*). Nottingham (*Ryles*). Kingston-upon-Soar, 29. iii. 1912 (*Woolley*).

- S. bupthalmus** Gr. Nottingham and Beeston, 1899 (*Ryles*).
- S. atratulus** Er. Sherwood Forest, one, in dead leaves, Oct. 1905 (*Taylor*).
- S. canaliculatus** Gyll. Nottingham; Beeston; Radcliffe-on-Trent (*Ryles*).
- S. declaratus** Er. Sherwood Forest, in moss, October 1905 (*Taylor*).
- S. nigrutilus** Gyll. Kingston-upon-Soar, in tuft of grass, 29. iii. 1912 (*Woolley*).
- S. brunnipes** Steph. Retford (*Pegler*). South Leverton, common in moss (*Thornley*). Kingston (*Woolley*).
- S. fuscicornis** Er. Grove near Retford, one, 1897 (*Pegler*).
- S. impressus** Germ. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Nuthall, 22. ix. 1914 (*Robinson*). Crow Wood Hill, West Leake, 14. vi. 1913.
- S. flavipes** Steph. Grove near Retford, from dead wood, 1897 (*Pegler*). Southwell and Beeston, 1899 (*Ryles*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley* and *Carr*). Papplewick, 28. iv. 1914 (*Robinson*).
- S. pubescens** Steph. Beeston, 9. iii. 1914; Radcliffe-on-Trent, 6. v. 1915 (*Robinson*). Park Drain, Misson, 22. ix. 1914.
- S. binotatus** Ljun. Beeston, 24. iv. 1913 (*Robinson*).
- S. nitidiusculus** Steph. Retford (*Pegler*). South Leverton (*Thornley*). Nottingham; Radcliffe-on-Trent; Southwell (*Ryles*).
- S. picipes** Steph. South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). North Wheatley (*Chamberlin*). Beeston; Chilwell (*Ryles*). Bulcote Wood, 17. x. 1913 (*Robinson*).
- S. cicindeloides** Gr. Nuthall, 9. vii. 1914 (*Robinson*).
- S. similis** Herbst. Retford (*Pegler*). South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*).
- S. tarsalis** Ljun. South Leverton (*Thornley*). Widmerpool (*Ryles*). Beeston, 24. iv. 1913; Radcliffe-on-Trent, 6. v. 1915 (*Robinson*).
- S. paganus** Er. South Leverton (*Thornley*).

OXYPORUS Fab.

- O. rufus** L. Sherwood Forest, in fungus, Aug. 1903 (*Taylor*); taken in same locality by Bedwell. Retford (*Pegler*).

Treswell Wood; South Leverton, 25. vi. 1903; Kingston-upon-Soar, several in a fungus, Aug. 1901 (*Thornley*). Nottingham (*Ryles*).

PLATYSTETHUS Man.

P. arenarius Fourc. Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton; Nottingham (*Thornley*). Clifton Grove near Nottingham, common, 10. x. 1909 (*Carr*). Arnold, 14. v. 1914 (*Robinson*). Widmerpool, 12. viii. 1914 (*Morley and Carr*).

OXYTELUS Gr.

- O. rugosus** Fab. Sherwood Forest (*Taylor*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, common (*Thornley*). Linby; Nottingham, by the Trent and elsewhere, frequent (*Carr*). Radcliffe-on-Trent, 1. iv. 1914 and 6. v. 1915; Nuthall, 25. vi. 1914 (*Robinson*).
- O. fulvipes** Er. Sherwood Forest, May 1905, two specimens in very damp rotten sawdust beneath a small yellow fungus (*J. Kidson Taylor, E.M.M., Dec. 1905, p. 280*).
- O. sculptus** Gr. Retford (*Pegler*). South Leverton; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*).
- O. laqueatus** Marsh. Retford (*Pegler*). South Leverton (*Thornley*). Near Newbound Mill, Teversall, 28. vi. 1913 (*Carr*). Radcliffe-on-Trent, 14. iv. 1910 (*Robinson*).
- O. inustus** Gr. Sherwood Forest, in fungus, May 1905 (*Taylor*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*). Wilford, 12. vi. 1913.
- O. sculpturatus** Gr. Sherwood Forest (*Taylor*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton; Nottingham (*Thornley*). Beeston, 23. vi. 1910; Holme Pierrepont, 18. vi.; Basingfield, 2. vii.—1914 (*Robinson*). Crow Wood Hill, West Leake, 19. v. 1914.
- O. nitidulus** Gr. South Leverton (*Thornley*). Papplewick, 1. vi. 1914; Nuthall, 15. iv.; Gamston, 28. iv.—1915 (*Robinson*).
- O. tetracarínatus** Block. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton, common (*Thornley*). Nottingham, common (*Carr*). Radcliffe-on-Trent, 1. iv. 1914; Nuthall, 15. iv. 1915 (*Robinson*).

HAPLODERUS Steph.

H. caelatus Gr. S. Leverton, on hawthorn blossom (*Thornley*).

TROGOPHLOEUS Man.

T. bilineatus Steph. South Leverton, in hot-bed, very common one year (*Thornley*).

T. corticinus Gr. South Leverton (*Thornley*).

T. pusillus Gr. Sherwood Rise, Nottingham, 3. vi. 1906 (*Thornley*).

SYNTOMIUM Er.

S. aeneum Müll. Radcliffe-on-Trent, 1898-99 (*Ryles*).

COPROPHILUS Kr.

C. striatulus Fab. Worksop (*Houghton*). Edwinstowe (*Pegler*). South Leverton (*Thornley*). Gamston near Retford (*Chamberlin*). Gunthorpe (*Ryles*).

LESTEVA Kr.

L. longelytrata Goeze. Retford (*Pegler*). South Leverton (*Thornley*). Nottingham and Radcliffe-on-Trent (*Ryles*). Thurgarton, 8. v. 1915.

OLOPHRUM Er.

O. piceum Gyll. Sherwood Forest (*Taylor*). Edwinstowe (*Pegler*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*).

O. fuscum Gr. Clumber, three specimens (*Pegler*).

LATHRIMAEUM Er.

L. atrocephalum Gyll. Retford (*Pegler*). Radcliffe-on-Trent (*Ryles*).

L. unicolor Steph. Sherwood Forest (*Taylor*). Treswell Wood, in fungus, 18. iv. 1899 (*Thornley*). Kingston-upon-Soar, in tuft of grass, 29. iii. 1912 (*Woolley*).

PHILORINUM Kr.

P. sordidum Steph. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 408).

CORYPHIUM Steph.

C. angusticollis Steph. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); taken in same locality, Oct. 1905, by Mr. Kidson Taylor. Clumber Park (*Pegler*).

HOMALIUM Gr.

- H. rivulare** Payk. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton; Nottingham; Kingston-upon-Soar; common (*Thornley*). Arnold; Bulwell (*Robinson*).
- H. allardi** Fairm. Sherwood Forest (*Chaster*).
- H. exiguum** Gyll. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 414).
- H. oxyacanthae** Gr. Sherwood Forest, among dead leaves, May 1905 (*Taylor*). See also *Fowler, Brit. Coleop.*, ii. 415.
- H. excavatum** Steph. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor, Tomlin*).
- H. caesum** Gr. Sherwood Forest, in straw heaps, Oct. 1886 (*Blatch and Horner*). Sherwood Forest (*Tomlin*). Retford (*Pegler*). South Leverton, common in haystack refuse, etc., Oct. 4. 1899, etc. (*Thornley*). Arnold, 14. v. 1914 (*Robinson*).
var. *tricolor* Ray. Sherwood Forest, one under bark, June 1903 (*Taylor*).
- H. pusillum** Gr. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); in same locality (*Bedwell*).
- H. punctipenne** Thoms. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*). Taken in the same locality by Chaster, Taylor and Tomlin.
- H. rufipes** Fourcr. Sherwood Forest (*Chaster, Tomlin*). North Notts. (*Chamberlin*). South Leverton, very common; on *Spiraea arunca* flowers in garden, Nottingham, 19. vi. 1912 (*Thornley*). Bulwell, 6. vii. 1911 (*Robinson*).
var. *nigrum* Gr. Sherwood Forest, Oct. 1886 (*Blatch and Horner*).
- H. salicis** Gyll. Sherwood Forest (*Blatch*).
- H. vile** Er. Sherwood Forest, under bark, Oct. 1905 (*Taylor*).
- H. iopterum** Steph. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*). Sherwood Forest (*Bedwell, Chaster, Taylor, Tomlin*). Retford (*Pegler*). South Leverton, on vicarage windows; Mapperley, Nottingham, on flowers of rhubarb, 21. v. 1914 (*Thornley*).
- H. planum** Payk. Sherwood Forest (*Fowler, Brit. Coleop.*, ii. 421).
- H. concinnum** Marsh. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*). Retford, in old mills, etc.

(*Pegler*). South Leverton, common in stables, etc., also in haystack refuse, Oct. 4. 1899, etc.; Mapperley, Nottingham, 24. vi. 1908 (*Thornley*).

H. deplanatum Gyll. Sherwood Forest (*Fowler*, *Brit. Coleop.*, ii. 422).

H. striatum Gr. Sherwood Forest (*Tomlin*).

HAPALARAEA Thoms.

H. pygmaea Payk. Sherwood Forest, in *Boletus*, June 1904 (*Taylor*).

ANTHOBIUM Steph.

A. minutum Fab. South Leverton (*Thornley*).

A. ophthalmicum Payk. Sherwood Forest, on hawthorn, June 1906 (*Taylor*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 (*Thornley* and *Carr*). Nottingham (*Ryles*). Bulwell, 6. vii. 1911; Watnall, 8. vii. 1909 (*Robinson*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*).

A. torquatum Marsh. Sherwood Forest (*Tomlin*). South Leverton (*Thornley*). Nottingham (*Ryles*).

PROTEINUS Latr.

P. ovalis Steph. Sherwood Forest (*Taylor*, *Tomlin*). South Leverton, common; Mapperley, Nottingham, common, 17. iv. 1912 (*Thornley*) Radcliffe-on-Trent (*Ryles*). Nuthall, 15. v. 1915 (*Robinson*).

P. brachypterus Fab. Sherwood Forest (*Taylor*, *Tomlin*). Treswell Wood, several in dead rabbit, 21. iii. 1898 (*Thornley*). Creswell Crags, Notts. side, 22. ix. 1913.

MEGARTHURUS Steph.

M. denticollis Beck. Sherwood Forest (*Fowler*, *Brit. Coleop.*, ii. 429).

M. depressus Payk. South Leverton (*Thornley*). Nottingham, 29. iv. 1915.

M. sinuatocollis Lac. Sherwood Forest, June 1906 (*Taylor*), and 11. vii. 1908 (*Donisthorpe*). South Leverton (*Thornley*).

PHLOEOCHARIS Man.

P. subtilissima Man. Sherwood Forest, under bark, October 1886 (*Blatch* and *Horner*). Taken in same locality by Messrs. Chaster, Taylor and Tomlin.

PSEUDOPSIS New.

- P. sulcata** New. South Leverton, one in haystack refuse, 4. x. 1899 (*Thornley*).

PROGNATHA Latr.

- P. quadricornis** Kirb. Sherwood Forest, Sept. 1885, very abundant under pine bark (*Blatch*).

LEPTINIDAE.

LEPTINUS Müll.

- L. testaceus** Müll. Sherwood Forest, amongst dead leaves (*H. Willoughby Ellis*).

CLAMBIDAE.

CALYPTOMERUS Redt.

- C. dubius** Marsh. South Leverton, not uncommon in haystack rubbish, 13. v. 1899 (*Thornley*). Clumber (*Pegler*).

SILPHIDAE.

AGATHIDIUM Ill.

- A. nigripenne** Kug. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch* and *Horner*); in same locality, under beech bark, June 1906 (*Taylor* and *Chaster*); also taken there by Tomlin. Clifton, 21. iv. 1914 (*Robinson*).
- A. atrum** Payk. Sherwood Forest (*Fowler, Taylor*).
- A. seminulum** L. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch* and *Horner*). Taken in same locality by Messrs. Chaster, Taylor and Tomlin.
- A. laevigatum** Er. Clumber (*Pegler*). Car Colston, 11. iv. 1912 (*Thornley* and *Carr*).
- A. varians** Beck. Sherwood Forest, under bark, June 1907 (*Donisthorpe*).
- A. rotundatum** Gyll. Sherwood Forest (*Fowler, Chaster*).
- A. nigrinum** Sturm. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch* and *Horner*); in same locality (*Taylor*).

AMPHICYLLIS Er.

- A. globus** Fab. Sherwood Forest (*Fowler, Chaster, Tomlin*); about fungi, June 1906 (*Taylor and Chaster*).

LIODES Latr.

- L. humeralis** Kug. Sherwood Forest (*Bedwell, Chaster, Ryles, Taylor, Tomlin*, etc.). Edwinstowe, common, Sept. 1909 (*Thornley*). Gamston near Retford (*Chamberlin*). Treswell Wood.
- L. orbicularis** Herbst. Sherwood Forest, in fungus, June 1886 (*Blatch*); frequent about fungi, June 1906 (*Taylor and Chaster*); taken also by Tomlin. First taken by Mr. Kidson Taylor in June 1868.

ANISOTOMA Ill.

- A. oblonga** Er. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 27).
- A. dubia** Kug. Sherwood Forest, June 1889 (*Blatch*).
- A. obesa** Schmidt. Sherwood Forest, several specimens at the end of August (*Fowler, Brit. Coleop.*, iii. 29).
- A. calcarata** Er. Sherwood Forest (*Bedwell, Chaster, Ryles, Tomlin*). Retford (*Pegler*). South Leverton, not uncommon (*Thornley*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).

COLENIS Er.

- C. dentipes** Gyll. Sherwood Forest, in decaying fungus, June 1868 (*Taylor*); in same locality, June 1889 (*Blatch*).

NECROPHORUS Fab.

- N. humator** Goeze. 'Notts., very common, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*J. Golding, Taylor, Tomlin*, etc.). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton (*Thornley*). Nottingham (*Ryles, Saunt*). Bingham (*R. Pilling*). Kingston, from bones, 29. iii. 1912 (*Woolley*). Epperstone Park; Langford Moor; Annésley, 15. viii. 1914 (*Saunt*).
- N. mortuorum** Fab. 'Mansfield and Welbeck, *Dr. Howitt*' (*Stephens*). Mansfield, on *Phallus impudicus*: Mr. Bunting (*Wm. Howitt, Book of the Seasons*). Sherwood Forest (*Taylor, Tomlin*). Barrow Hills, Everton, 4. ix. 1903

(*Thornley and Carr*). Retford (*Pegler*). Newstead (*Carr*). Nottingham; Aspley Woods (*Ryles*). Kingston-upon-Soar, in dead rabbits, Aug. 1905 and 1911 (*Thornley*).

N. vestigator Hers. 'Notts., very abundant, *Dr. Howitt*' (*Stephens*). Newstead, under a dead rabbit (*Wm. Allen* in *Ent. Wkly. Intell.*, June 14, 1856, i. 84). Nottingham district, one specimen, July 1898 (*B. S. Dodd*). Clumber (*Pegler*).

N. ruspator Er. Sherwood Forest, in a dead rabbit, Aug. 1903 (*Taylor*). Worksop (*Houghton*). Retford district (*Pegler*). Barrow Hills, Everton, 4. ix. 1903 (*Thornley and Carr*). South Leverton; Kingston-upon-Soar, in dead mole, 8. viii. 1905, and in Aug. 1911; Mapperley, Nottingham, 30. vii. 1911 (*Thornley*). Nottingham district (*Ryles*). Bulwell (*Robinson*). Annesley, 15. viii. 1914 (*Saunt*).

var. *microcephalus* Thoms. Aspley Woods near Nottingham (*Ryles*).

N. interruptus Steph. 'Near Nottingham, rare, *Dr. G. Howitt*' (*Stephens, Illust. Brit. Ent., Mandib.*, iii. 366).

N. vespillo L. 'Very common in Notts., *Dr. Howitt*' (*Stephens*). 'Under a dead rabbit at Newstead, Notts.' (*Wm. Allen* in *Ent. Wkly. Intell.*, June 14, 1856, i. 84). Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Leverton, common; woods about Kingston and West Leake (*Thornley*). Basford (*Robinson*). Gedling, 13. v. 1911 (*Saunt*).

NECRODES Wilk.

N. littoralis L. 'In dead animals in the vale of Trent, *Dr. G. Howitt*' (*Stephens, Ill. Br. Ent., Mandib.*, iii. 366). Woods at Kingston-upon-Soar, 17. viii. 1905 (*Thornley*).

SILPHA L.

S. tristis Ill. 'Has once occurred in Notts., *Dr. Howitt*' (*Stephens, Mandib.*, iii. 367). Nottinghamshire (*Fowler, Brit. Coleop.*, iii. 48).

S. nigrita Creutz. Extremely common throughout the county, *Howitt*' (*Stephens, Ill. Br. Ent., Mandib.*, iii. 367). Nottingham district (*Ryles, Dodd*).

S. obscura L. 'Nottingham Forest, very local, *Dr. Howitt*' (*Stephens*). Nottinghamshire (*Fowler, Brit. Coleop.*, iii. 49).

S. quadripunctata L. Sherwood Forest: taken by Messrs. Bedwell, Fowler, Ryles, Taylor and Tomlin; also in Clumber Park by Mr. S. Pegler.

- S. reticulata** Fab. 'Mansfield Forest, once taken by Mr. Smith: *Dr. Howitt*' (*Stephens, Mandib.*, iii. 368). Nottinghamshire (*Fowler*).
- S. opaca** L. 'Nottingham Forest, *Dr. Howitt*' (*Stephens*). 'Sometimes taken in the vicinity of Nottingham' (*Wm. Howitt, Book of the Seasons*). Nottinghamshire (*Fowler*). South Leverton, 7. v. 1898 (*Thornley*).
- S. thoracica** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Under a dead rabbit at Newstead, Notts. (*Wm. Allen, Ent. Wkly. Intell.*, June 14, 1856, i. 84). Sherwood Forest (*Bedwell*). Barrow Hills, Everton, under a dead rabbit, 4. ix. 1903 (*Thornley and Carr*).
- S. rugosa** L. 'Common in Nottinghamshire, *Dr. Howitt*' (*Stephens*). Under a dead rabbit at Newstead, Notts., (*Wm. Allen, Ent. Wkly. Intell.*, 1856, i. 84). Sherwood Forest (*Taylor, Tomlin*). Worksop (*Houghton*). Elkesley, common (*Chamberlin*). Kingston Woods, in dead rabbits, 8. viii. 1905 and Aug. 1911 (*Thornley*). Orston, several in dead fowl, and numerous larvae in cod's head, 11. v. 1907.
- S. sinuata** Fab. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Ryles, Taylor, Tomlin*). Clumber (*Pegler*). Elkesley, common (*Chamberlin*). South Leverton, in dead rook; Kingston-upon-Soar (*Thornley*). Radcliffe-on-Trent (*Ryles*).
- S. atrata** L. 'Occurs in profusion during some seasons, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Tomlin*). Retford district (*Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles*).
- var. *brunnea* Herbst. Clifton Grove (*Ryles*). Wellow Park, 20. ix. 1911 (*Thornley and Carr*).

CHOLEVA Latr.

- C. angustata** Fab. 'Nottingham, rather uncommon, *Dr. G. Howitt*' (*Stephens*). Nottingham, 11. x. 1909 (*Carr*). Sherwood Forest (*Tomlin*).
- C. cisteloides** Fröh. Nottingham (*Ryles*). South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*).
- C. intermedia** Kr. Nottingham (*Ryles*).
- C. spadicea** Sturm. Nottingham district, at root of a tree, Jan. 1885—determined by Canon Fowler (*Thos. Ludgrove, Entom.*, iv. 85; xviii. 124).

- C. agilis** Ill. Retford district (*Pegler*). South Leverton, three specimens in an outhouse (*Thornley*). Rampton (*Chamberlin*). Worksop, April and May 1914 (*Hodding*).
- C. velox** Spence. Sherwood Forest (*Blatch and Horner, Bedwell, Taylor*). Retford (*Pegler*). South Leverton (*Thornley*).
- C. wilkini** Spence. Sherwood Forest (*Taylor*).
- C. anisotomoides** Spence. Treswell (*Thornley*). Retford (*Pegler*).
- C. fusca** Panz. South Leverton (*Thornley*).
- C. nigricans** Spence. South Leverton, one in flood refuse (*Thornley*).
- C. coracina** Kell. 'Sherwood Forest, one example in carrion, June 1908; named by Mr. Newbery' (*Bedwell*). Kingston-upon-Soar, 1912 (*Thornley*).
- C. morio** Fab. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 61).
- C. grandicollis** Er. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*). Taken also in same locality by Bedwell, and in Clumber Park by Pegler (Aug. 1899). South Leverton; Treswell; Kingston-upon-Soar (*Thornley*).
- C. nigrita** Er. Sherwood Forest, in dead jackdaw, June 1906 (*Taylor*). South Leverton (*Thornley*).
- C. tristis** Panz. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*). South Leverton, common; Treswell Wood, in dead rabbit, 21. iii. 1898; Kingston-upon-Soar (*Thornley*).
- C. kirbyi** Spence. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*).
- C. chrysomeloides** Panz. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); in same locality (*Taylor*). Retford district (*Pegler*). Clarborough, two specimens in dead partridge, 17. iii. 1896 (*Thornley*).
- C. fumata** Spence. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*); taken in same locality by J. Kidson Taylor. South Leverton (*Thornley*).
- C. watsoni** Spence. 'Near Nottingham, one specimen only, Dr. Howitt (*Stephens, Mandib.*, iii. 366). Sherwood Forest, in carrion, October 1886 (*Blatch and Horner*). Sherwood Forest, in dead jackdaw, June 1906 (*Taylor*).

CATOPS Payk.

- C. sericeus** Panz. 'Not uncommon near Nottingham, *Dr. Howitt*' (*Stephens*). Nottingham (*Ryles*). South Leverton (*Thornley*). Retford (*Pegler*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*). Crow Wood Hill, West Leake, 9. viii. 1914.
- C. varicornis** Rosen. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 66). Retford (*Pegler*).
- C. sericatus** Chaud. Sherwood Forest, in a dead owl, June 1905 (*J. Kidson Taylor*).

COLON Herbst.

- C. brunneum** Latr. Crow Wood Hill, West Leake, 14. vi. 1913 (*Carr and Thornley, teste J. J. Walker*).

SCYDMAENIDAE.

NEURAPHES Thoms.

- N. elongatulus** Müll. Sherwood Forest (*Fowler, Chaster*).
- N. angulatus** Müll. Sherwood Forest, under bark, (*Fowler, Chaster*).
- N. sparshalli** Den. Sherwood Forest, under bark of oak log (*Bedwell*).
- N. planifrons** Blatch. Sherwood Forest, under bark of birch stumps, May 1884, Sept. 1885, June 1889 (*Blatch, E.M.M.*, April 1890, p. 98).

SCYDMAENUS Latr.

- S. godarti** Latr. 'Taken in July 1861 in Sherwood Forest by Mr. Matthews and determined for him by M. Aubé' (*Rye in Entom. Ann.* for 1863, p. 90). Sherwood Forest, in rotten wood with ants, also on newly felled timber in the evening (*Fowler, Brit. Coleop.*, iii. 77). Taken in the Forest, under bark, Oct. 1886, by Messrs. Blatch and Horner; also by Messrs. Chaster, Taylor and Tomlin).
- S. scutellaris** Müll. Sherwood Forest (*Chaster, Taylor, Tomlin*).
- S. collaris** Müll. Sherwood Forest: under bark, Oct. 1886 (*Blatch and Horner*); taken also by Chaster, Taylor and Tomlin; and on July 11, 1908 by H. Donisthorpe.

- S. exilis** Er. Sherwood Forest: 'in some numbers' (*Fowler, Brit. Coleop.*, iii. 79); under bark, Oct. 1886 (*Blatch and Horner*); under bark, June 1907 (*Donisthorpe*). Taken also in same locality by Messrs. Chaster, Taylor and Tomlin.

EUCONNUS Thoms.

- E. nanus** Schaum. Sherwood Forest (*H. Willoughby Ellis*).

EUMICRUS Lap.

- E. tarsatus** Müll. South Leverton, on the wing in spring and among haystack refuse in autumn (*Thornley*). Barrow Hills, Everton (*Chamberlin*).

EUTHIA Steph.

- E. clavata** Reitt. 'Sherwood Forest, under bark of oak logs, rare; first taken by Mr. Blatch in the early spring of 1883, and subsequently by Messrs. Blatch and Horner in the same locality' (*Fowler, Brit. Coleop.*, iii. 84). Sherwood Forest, under bark of oak and birch logs, Oct. 1886 (*Blatch and Horner*). Taken again by Blatch in June 1889. Sherwood Forest, two specimens in decaying birch bough in April 1893 (*Fowler*). Taken there also by G. W. Chaster.

CLAVIGERIDAE.

CLAVIGER Preys.

- C. testaceus** Preys. Worksop, in nests of *Lasius flavus*, 1907 (*Houghton*).

PSELAPHIDAE.

PSELAPHUS Herbst.

- P. heisei** Hbst. Treswell Wood, one example by sweeping, 7. v. 1900 (*Thornley*). Sherwood Forest (*Tomlin*).

TYCHUS Leach.

- T. niger** Payk. Sherwood Forest (*Taylor, Tomlin*). Retford district (*Pegler*). South Leverton, in moss; Treswell, the var. *ibericus* (*Thornley*).

BYTHINUS Leach.

- B. bulbifer** Reich. Colwick Wood, in moss, 15. iii. 1906.

- B. curtisi** Den. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch* and *Horner*, *E.M.M.*, Feb. 1887, pp. 212-213. Also taken in the Forest by Mr. J. Kidson Taylor).

BATRISUS Aub.

- B. venustus** Reich. Sherwood Forest: 'In a nest of *Formica fuliginosa* in an old tree' (*Fowler*, *Brit. Coleop.*, iii. 93); under bark of logs and stumps, Oct. 1886 (*Blatch* and *Horner*), also in June 1889 (*Blatch*); in dry wood, May 1913 (*E. W. Morse*); taken also by Messrs. Bedwell, Chaster, Taylor and Tomlin.

RYBAXIS Saul.

- R. sanguinea** L. Kingston-upon-Soar, in tuft of grass, 29. iii. 1912 (*Woolley*).

BRYAXIS Leach.

- B. fossulata** Reich. South Leverton (*Thornley*).
B. haematica Reich. Cottam near Retford (*Pegler*).

BIBLOPORUS Thoms.

- B. bicolor** Den. Sherwood Forest (*Chaster*).

EUPLECTUS Leach.

- E. punctatus** Muls. Sherwood Forest: taken by Rev. A. Matthews, Canon Fowler, Messrs. Blatch and Horner, Chaster and Tomlin.
E. karsteni Reich. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch* and *Horner*).
E. signatus Reich. Sherwood Forest (*Blatch*).
E. nanus Reich. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch* and *Horner*); in same locality (*Chaster*, *Taylor*).
E. sanguineus Den. Sherwood Forest.
E. piceus Mots. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch* and *Horner*); also taken in the Forest by Messrs. Bedwell, Chaster, Taylor and Tomlin.
E. nubigena Reitt. Sherwood Forest, May 1884, Sept. 1885, June 1889 (*Blatch*); also in Oct. 1886 under bark of logs and stumps (*Blatch* and *Horner*).

TRICHOPTERYGIDAE.

PTERYX Mat.

- P. suturalis** Heer. Sherwood Forest, under bark, Oct. 1886
(*Blatch and Horner*); in same locality (*Chaster, Taylor*).

PTINELLA Mots.

- P. testacea** Heer. Sherwood Forest, under bark, Oct. 1886
(*Blatch and Horner*).
- P. denticollis** Fair. Sherwood Forest, under bark, Oct. 1886
(*Blatch and Horner*).
- P. aptera** Guér. Sherwood Forest, under bark, Oct. 1886
(*Blatch and Horner*).
- P. angustula** Gill. Sherwood Forest, under bark, Oct. 1886
(*Blatch and Horner*).
- P. tenella** Er. Sherwood Forest, a single example from under
dead oak-bark (*Fowler, Brit. Coleop.*) A single winged
example taken by Mr. Matthews in Sherwood Forest (*Rye,*
Ent. Ann. for 1863 p. 106).

TRICHOPTERYX Kirb.

- T. sarae** Mat. 'Two specimens of this fine insect (named in
honour of Mrs. Matthews) were taken five years ago in
Nottinghamshire by the Rev. H. Matthews' (*Ent. Ann.* for
1867, p. 54). 'Nottinghamshire: two specimens taken in
the county by Rev. H. Matthews in 1861. The species has
not been found since that time' (*Fowler, Brit. Coleop.*, iii.
116).
- T. atomaria** De G. South Leverton and Welham near
Retford (*Thornley*).
- T. anthracina** Mat. Sherwood Forest, many specimens taken
by Mr. Matthews in 1867 (*E.M.M.*, June 1868, pp. 9—13;
Fowler, Brit. Coleop., iii. 118).
- T. lata** Mots. Sherwood Forest, in vegetable refuse, October
1904 (*Taylor*); in same locality (*Bedwell*).
- T. seminitens** Mat. Sherwood Forest, in faggots (*Fowler,*
Brit. Coleop., iii. 120).
- T. attenuata** Gill. Sherwood Forest, in faggots, *Matthews*
(*Fowler, Brit. Coleop.*, iii. 120).

- T. sericans** Heer. South Leverton vicarage garden (*Thornley*).
T. bovina Mots. South Leverton (*Thornley*).
T. picicornis Man. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 123).
T. carbonaria Mat. Thoresby Park, Sherwood Forest, a single example taken in August 1868 by Rev. A. Matthews, by sweeping under oaks. (*E.M.M.*, Jan. 1873, p. 179; *Fowler, Brit. Coleop.*, iii. 123).
T. obscoena Woll. Sherwood Forest, a single example taken by Rev. A. Matthews in 1867 (*E.M.M.*, June 1868; *Fowler, Brit. Coleop.*, iii. 124).

PTILIUM Er.

- P. marginatum** Aub. Sherwood Forest, under bark, *Blatch* (*Fowler, Brit. Coleop.*, iii. 131).
P. halidayi Mat. Sherwood Forest, a single example taken in 1867 by Rev. A. Matthews under bark of dead oak (*E.M.M.*, June 1868, p. 9; *Fowler, Brit. Coleop.*, iii. 134).

EURYPTILIUM Mat.

- E. saxonicum** Gill. Sherwood Forest near Edwinstowe, named by Dr. Joy (*Tomlin*).

PTENIDIUM Er.

- P. nitidum** Heer. South Leverton (*Thornley*).
P. evanescens Marsh. South Leverton, common (*Thornley*). Retford district (*Pegler*).
P. turgidum Thoms. Sherwood Forest, June 1889 (*Blatch*).
P. gressneri Er. Sherwood Forest, two examples from a rotten birch stump, May 13—23, 1884 (*Blatch, E.M.M.*, 1884-5, p. 36). Sherwood Forest, in nest of *Lasius fuliginosus*, June 1907 (*Donisthorpe*).

CORYLOPHIDAE.

ORTHOPERUS Steph.

- O. brunnipes** Gyll. Sherwood Forest.
O. corticalis Redt. Sherwood Forest, two specimens taken by Rev. A. Matthews (*Fowler, Brit. Coleop.*, iii. 144).

O. atomus Gyll. Sherwood Forest, June 1889 (*Blatch*).

O. atomarius Heer. Sherwood Forest, beaten out of faggots,
June 1907 (*Donisthorpe*).

CORYLOPHUS Steph.

C. cassidioides Marsh. Clumber Park (*Pegler*).

PHALACRIDAE.

PHALACRUS Payk.

P. caricis Sturm. Retford district (*Pegler*).

OLIBRUS Er.

O. corticalis Panz. Sherwood Forest (*Tomlin*).

O. aeneus Fab. Retford district (*Pegler*). South Leverton
and Treswell (*Thornley*). Gunthorpe (*Ryles*).

STILBUS Seid.

S. testaceus Panz. Sherwood Forest (*Chaster, Taylor, Tomlin*).
Retford district (*Pegler*). South Leverton, common (*Thorn-*
ley). Nottingham and Beeston (*Ryles*).

COCCINELLIDAE.

SUBCOCCINELLA Huber.

S. 24-punctata L. South Leverton (*Thornley*).

HIPPODAMIA Muls.

H. variegata Goeze. South Leverton (*Thornley*).

ANISOSTICTA Dup.

A. 19-punctata L. South Leverton, in the Delph (*Thornley*).

ADALIA Muls.

A. obliterated L. Sherwood Forest—Budby, Edwinstowe, etc.,
common. Retford district (*Pegler*). Barrow Hills, Everton
(*Chamberlin*). Kingston-upon-Soar; West Leake Hills,
abundant, 29. viii. 1912 (*Thornley*). Langford Moor, com-
mon on firs; Aspley Woods, Nottingham, 3. iv. 1912;

North Collingham, 25. viii. 1913; Cuckney Hay Wood, Nether Langwith, 10. viii. 1914.

var. *fenestrata* Weise. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 160).

A. bipunctata L. Very common throughout the county.

MYSIA Muls.

M. oblongoguttata L. Langford Moor, 1913 (*Saunt*).

ANATIS Muls.

A. ocellata L. Sherwood Forest, June 1903-4-5, by beating oak, birch, larch, etc. (*Taylor*). Clumber Park (*Pegler*). Langford Moor near Newark, common (*Thornley, Carr, Saunt*). West Leake Hills (*Thornley and Carr*).

COCCINELLA L.

C. 10-punctata L. Common throughout the county.

C. hieroglyphica L. Sherwood Forest (*Tomlin*).

C. 11-punctata L. Sherwood Forest (*Taylor, Carr*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district, common.

C. 7-punctata L. Sherwood Forest, common (*Carr*). Worksop (*Houghton*). Wheatley district, common (*Chamberlin*). Wellow Park, 20. ix. 1911; Nether Langwith, 19. viii. 1912; Nottingham district, common; Kingston-upon-Soar; Gotham, 28. viii. 1906 (*Thornley and Carr*). Linby, 28. iv. 1914 (*Robinson*). Newstead (*Saunt*).

HALYZIA Muls.

H. 14-guttata L. Sherwood Forest, frequent; Gamston near Retford; North Collingham; Langford Moor (*Carr*). Treswell Wood, common; Kingston; Car Colston (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Nottingham and Aspley (*Ryles*). Bulcote Wood (*Robinson*).

H. 18-guttata L. Sherwood Forest (*Taylor, A. R. Jackson*). Edwinstowe, 10. viii. 1914 (*Carr*). Worksop (*Houghton*). Retford district (*Pegler*).

H. conglobata L. Sherwood Forest (*Fowler, Taylor*). Gamston Wood near Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). Markham Clinton (*Miss M. C. Atkinson*). Gotham, 28. viii. 1906 (*Thornley and Carr*).

H. 22-punctata L. Notts. (*William Howitt*, 1830). Nottingham (*Ryles*). Arnold; Bradmore; Strelley; Nuthall (*Robinson*). Bingham; Kingston; Gotham; West Leake Hills (*Thornley and Carr*). Tollerton (*Saunt*). Lowdham (*C. E. Pearson*). South Leverton; Treswell (*Thornley*). Retford district (*Pegler*). Worksop (*Houghton*). Barrow Hills, Everton; Elkesley (*Chamberlin*).

SCYMNUS Kug.

- S. nigrinus** Kug. Sherwood Forest (*Bedwell, Chaster*).
S. suturalis Thunb. Sherwood Forest, by beating Scots pines, June 1905 (*Taylor*); in same locality (*Bedwell*).
S. testaceus Mots., var. *scutellaris* Muls. Canal bank, Retford (*Pegler*).
S. haemorrhoidalis Herbst. Sherwood Forest (*Tomlin*).
S. capitatus Fab. Sherwood Forest, by beating oaks, Aug. 1903 and June 1904 (*Taylor*); in same locality (*Chaster, Tomlin*). Quarry Banks, Linby, 20. vii. 1914.
S. ater Kug. Gamston near Retford (*Chamberlin*).

PLATYNASPIS Redt.

- P. luteorubra** Goeze. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 175).

CHILOCORUS Leach.

- C. similis** Ross. Sherwood Forest, by beating birches (*Taylor*). Treswell Wood, 18. iv. 1899; Castle Hill Wood, Grove, 19. iv. 1899; common on young ash trees in both places (*Thornley and Carr*). Staunton, on young ashes, 6. v. 1899; Park Wood, Caunton, on young ash trees, 9. vi. 1908 (*Carr*). Mapperley, Nottingham, 19. and 26. v. 1912 (*Thornley*). Nottingham (*Saunt*).
C. bipustulatus L. Sherwood Forest (*Fowler*); in same locality, by beating birches, June 1907 (*Taylor*). Barrow Hills, Everton, on broom, 13. ix. 1901 (*Thornley and Chamberlin*).

EXOCHOMUS Redt.

- E. quadripustulatus** L. Sherwood Forest, frequent. Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). Treswell Wood; Langford Moor; Kingston-upon-Soar, frequent; West Leake Hills, 29. viii. 1912 (*Thornley*). Nottingham; Beeston (*Ryles*). Widmerpool; Gotham, 28. viii. 1906.

RHIZOBIUS Steph.

- R. litura** Fab. Sherwood Forest (*Taylor, Tomlin*). Retford (*Pegler*). South Leverton; Bilsthorpe, 17. v. 1908; Bingham, 11. iv. 1912 (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Nottingham (*Ryles, Saunt*). Car Colston, 11. v. 1912; East Leake, 26. v. 1912 (*Carr*). Cotgrave, 23. x. 1913; Beeston, 13. viii. 1914 (*Robinson*).

COCCIDULA Kug.

- C. rufa** Herbst. Retford (*Pegler*). South Leverton (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Misson and Finningley, 22. ix. 1914.

ENDOMYCHIDAE.**MYCETAEA** Steph.

- M. hirta** Marsh. South Leverton, one example in haystack rubbish, 13. v. 1899, one in outhouse, and seven specimens under lid of sea-kale pot in garden, 30. iii. 1900 (*Thornley*). Retford (*Pegler*).

EROTYLIDAE.**DACNE** Latr.

- D. rufifrons** Fab. 'Occasionally in profusion near Nottingham, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Chaster, Taylor, Tomlin*). Worksop (*Houghton*). South Wheatley (*Chamberlin*). Littleborough, in fungus; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Nottingham; Lambley; Hazleford; Fiskerton; Newark (*Ryles*).

TRIPLAX Payk.

- T. russica** L. 'On ash trees near Nottingham, *Dr. G. Howitt*' (*Stephens, Ill. Brit. Ent., Mandib., iii. 369*). Sherwood Forest, in decaying fungus, June 1868 (*J. Kidson Taylor*). Recorded for the Forest also by Fowler, *E.M.M.*, July 1893, p. 162.
- T. aenea** Schall. Nottingham, in numbers, in company with *Tetratoma fungorum*; Wilford (*Ryles*). Littleborough (*Thornley*).

CYRTOTRIPLAX Crotch.

- C. bipustulata** Fab. Sherwood Forest, 1868 (*Taylor*); in same locality (*Chaster, Tomlin*).

COLYDIIDAE.

TEREDUS Shuck.

- T. nitidus** Fab. Sherwood Forest, eight specimens, all under bark of oak stumps, in every case associated with *Dryocoetes villosus*, May 13—23, 1884 (*Blatch*). Sherwood Forest (*Tomlin*).

OXYLAEMUS Er.

- O. cylindricus** Panz. Sherwood Forest (*Tomlin*).

SYNCHITA Hell.

- S. juglandis** Fab. Sherwood Forest, several under bark, 21—25. vi. 1907 (*Donisthorpe, Taylor*).

CERYLON Latr.

- C. histeroides** Fab. 'Under bark of willows, Notts., *Dr. G. Howitt*' (*Stephens*, l.c., 370). Sherwood Forest (*Taylor, Tomlin*).
- C. fagi** Bris. Nottingham; Wollaton (*Ryles*).
- C. ferrugineum** Steph. Sherwood Forest, under bark of logs and stumps, Oct. 1886 (*Blatch and Horner*); in same locality (*Chaster, Tomlin*). Retford (*Pegler*). Wollaton.

HISTERIDAE.

HISTER L.

- H. unicolor** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Nottingham (*Ryles*). Retford; South Leverton (*Thornley*).
- H. merdarius** Hoffm. 'Occurs occasionally in the Forest, *Dr. Howitt*' (*Stephens*). Sherwood Forest, in dead sheep, June 1886 (*Blatch*). South Leverton, on several occasions; Kingston-upon-Soar, 1912 (*Thornley*).
- H. cadaverinus** Hoffm. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Bedwell, Chaster, Taylor, Tomlin*). Worksop (*Houghton*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton (*Thornley*). Hucknall Torkard, 1. vi. 1911 (*Robinson*). Nottingham (*Ryles, Saunt*). Epperstone Park; Langford Moor (*Saunt*).
- H. succicola** Thoms. Sherwood Forest, in dead sheep, June 1886 (*Blatch*); taken in same locality by Messrs. *Bedwell, Chaster, Taylor, Tomlin* and others.

- H. purpurascens** Herbst. 'Very common in sandy places in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Fowler, Taylor*). Fiskerton (*Ryles*).
- H. marginatus** Er. Sherwood Forest (*Chaster*).
- H. neglectus** Germ. 'Two specimens taken on the sand in the Forest, *Dr. Howitt*' (*Stephens*). [There were specimens in the Hadfield collection, presumably taken at or near Newark.]
- H. carbonarius** Ill. 'Very abundant in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Chaster, Taylor, Tomlin*). Near Ollerton (*Carr*). Retford district (*Pegler*). South Leverton, common; Kingston-upon-Soar (*Thornley*). Nottingham district, common (*Ryles*).
- H. 12-striatus** Schr. 'Rather frequent in the Forest, *Dr. Howitt*' (*Stephens*). Nottingham (*Ryles*). South Leverton (*Thornley*).
- H. bimaculatus** L. South Leverton, not uncommon (*Thornley*).

CARCINOPS Mars.

- C. 14-striata** Steph. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*). Retford, in old corn-mill (*Pegler*).

DENDROPHILUS Leach.

- D. punctatus** Herbst. 'One specimen from dead bird in the Forest, Notts., 1828, *Dr. G. Howitt*' (*Stephens, Illust. Br. Ent., Mandib.*, iii. 372). Sherwood Forest (*Taylor, Tomlin*).

GNATHONCUS Duv.

- G. nannetensis** Mars. Sherwood Forest, in Boletus on oak, Aug. 1903, and under dead jackdaw, June 1905 (*Taylor*). Sherwood Forest (*Bedwell*). Lowdham station yard, 12. vi. 1906.
- G. punctulatus** Thoms. Retford, in old corn mill, not uncommon (*Pegler*). South Leverton, one, 20. v. 1901 (*Thornley*).

SAPRINUS Er.

- S. nitidulus** Payk. Notts., 'very abundant, *Howitt*' (*Stephens*). Sherwood Forest (*Bedwell, Taylor*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar, frequent (*Thornley*). Elkesley (*Chamberlin*). Langford Moor (*Saunt*). Bulwell Forest, 3. vi. 1899.

S. aeneus Fab. 'Abundant in Notts., *Dr. Howitt*' (*Stephens*).
Bulwell Forest, 8. vi. 1899.

S. virescens Payk. 'Once taken by Mr. Marlow at Welbeck,
Dr. Howitt' (*Stephens*). Barrow Hills, Everton, under a
stone, July 1905 (*Chamberlin*).

HYPOCACCUS Thoms.

H. rugifrons Payk. Sherwood Forest (*Fowler, Brit. Coleop.*,
iii. 212).

PLEGADERUS Er.

P. dissectus Er. Sherwood Forest. Taken by Mr. Kidson
Taylor in 1870, and subsequently by Messrs. Blatch and
Horner, Matthews, Bedwell, Chaster, Tomlin and others.

ABRAEUS Leach.

A. globosus Hoffm. Sherwood Forest, under bark, Sept. 1885
(*Blatch*). Retford, 1897 (*Pegler*).

A. granulum Er. Sherwood Forest, June 1889 (*Blatch*).

ACRITUS Lec.

A. minutus Herbst. South Leverton, in hot bed in vicarage
garden (*Thornley*).

ONTHOPHILUS Leach.

O. globulosus Ol. Near Nottingham, 1830 (*A. H. Davis in
Loudon's Mag. N.H.*, v. 245—248, April 1832). 'Has twice
occurred in Notts., *Dr. Howitt*' (*Stephens*). 'Found in the
vicinity of Nottingham, very rarely, but always near dead
animals' (*Wm. Howitt, Book of the Seasons*, 1830).

O. striatus Fab. 'Very abundant in the spring of 1830 in
Nottingham Forest, *Dr. Howitt*' (*Stephens*). 'Extremely
abundant this spring (1830)' (*Wm. Howitt, Book of the
Seasons*). South Leverton, three examples in haystack
refuse (*Thornley*).

MICROPEPLIDAE.

MICROPEPLUS Latr.

M. porcatus Payk. 'Once taken in Notts., *Dr. Howitt*'
(*Stephens*). Gunthorpe (*Ryles*). South Leverton (*Thornley*).

- M. staphylinoides** Marsh. Chilwell (*Ryles*).
M. margaritae Duv. Sherwood Forest (*Taylor*); in same locality, beaten out of faggots, June 1907 (*Donisthorpe*). Bulcote, Oct. 1899 (*Ryles*). Nottingham, 11. iii. 1915.
M. tesserula Curt. Sherwood Forest: one specimen by sweeping at sunset, 27. viii. 1880 (*Fowler*); 36 specimens taken off a sappy stump of recently-felled oak, June 1889 (*Blatch*); taken in same locality by Messrs. Bedwell and Tomlin.

NITIDULIDAE.

BRACHYPTERUS Kug.

- B. pubescens** Er. Common throughout the county.
B. urticae Fab. Sherwood Forest (*Taylor*). Nottingham and Retford districts (*Ryles* and *Thornley*). Upton near Southwell, 30. vi. 1913; North Collingham, 25. viii. 1913; Radcliffe-on-Trent, 25. v. 1912 (*Carr*). Gotham, 9. viii. 1912; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*).

CERCUS Latr.

- C. pedicularius** L. Retford district (*Pegler*). Oxtou Bogs, 24. iv. 1913.
C. bipustulatus Payk. Sherwood Forest, in *Cossus* burrows (*Fowler*, *E.M.M.*, 1884-5, p. 36). Papplewick, 28. iv. and 1. vi. 1914 (*Robinson*).

CARPOPHILUS Leach.

- C. sexpustulatus** Fab. Edwinstowe, Sherwood Forest, under bark of a newly-fallen oak branch, 12. v. 1913 (*E. W. Morse*).
C. mutilatus Er. Sherwood Forest, taken sparingly by Mr. J. R. Hardy in *Cossus* burrows (*Fowler*, *Brit. Coleop.*, iii. 224).

EPURAEA Er.

- E. decemguttata** Fab. Sherwood Forest (*Fowler*, *E.M.M.*, 1884-5, p. 93).
E. aestiva L. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). Treswell Wood, 29. v. 1899; garden at Mapperley, Nottingham, common on flowers of *Spiraea*, June 1912, and on flowers of rhubarb, 21. v. 1914 (*Thornley*). Watnall, 8. vii.

1909 and 28. v. 1914 (*Robinson*). Nottingham district (*Ryles*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).

E. melina Er. South Leverton; Treswell Wood, 7. v. 1900 (*Thornley*).

E. longula Er. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 229).

E. florea Er. Sherwood Forest, on hawthorn blossom, June 1906 (*Taylor*).

E. deleta Er. Sherwood Forest (*Taylor, Tomlin*). Retford district (*Pegler*). South Leverton; Treswell Wood; Sturton-le-Steeple; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*).

E. parvula Sturm. Sherwood Forest, found in numbers by shaking faggots over a sheet (*Fowler and Matthews, E.M.M.*, 1884-5, p. 97); taken in same locality by Mr. J. Kidson Taylor.

E. obsoleta Fab. Sherwood Forest (*Taylor*). South Leverton, one example, 28. v. 1900 (*Thornley*). Epperstone Park, 6. ix. 1913 (*Thornley and Carr*).

E. pusilla Ill. Sherwood Forest, under oak bark, June 1903 (*Taylor*).

OMOSIPHORA Reit.

O. limbata Fab. Retford district (*Thornley, Pegler*). North Notts. (*Chamberlin*).

NITIDULA Fab.

N. bipustulata L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar, in old bones, Aug. 1911 (*Thornley*). Nottingham district (*Ryles*). Langford Moor (*Saunt*).

N. rufipes L. 'Notts., rare, *Dr. Howitt*' (*Stephens*). Kingston-upon-Soar, several specimens collected by Messrs. Russell and Cranfield, 1912 (*Thornley*).

SORONIA Er.

S. grisea L. 'Under bark of willows, common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest, June 1906 (*Taylor*). Retford (*Pegler*). South Leverton; Cottam (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*).

OMOSITA Er.

- O. depressa** L. Sherwood Forest, in dead sheep, June 1886 (*Blatch*). Retford (*Pegler*).
- O. colon** L. 'Abundant in Notts., *Dr. Howitt*' (*Stephens*). Retford district (*Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles*). Orston, in cod's skull, 11. v. 1907.
- O. discoidea** Fab. 'Abundant in Notts., *Dr. Howitt*' (*Stephens*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Nottingham, May 1912 (*Thornley*). Nottingham district (*Ryles*). Kingston-upon-Soar, from bones, 29. iii. 1912 (*Woolley*):

POCADIUS Er.

- P. ferrugineus** Fab. 'Welbeck, Notts., 1828, Mr. Marlow, *Dr. Howitt*' (*Stephens*). Clumber (*Pegler*). Treswell Wood, one example from a fungus on a rotten stump, 5. viii. 1901; West Leake Hills, several specimens from puff-balls, 29. viii. 1912 (*Thornley*).

MELIGETHES Kirby.

- M. rufipes** Gyll. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Worksop (*Houghton*). Retford district (*Pegler*). Treswell Wood, 29. v. 1899; North Leverton, common on gorse, 18. v. 1901 (*Thornley*). Nether Langwith, 19. viii. 1912; Crow Wood Hill, West Leake, common on wild rose, 14. vi. 1913 (*Thornley* and *Carr*). North Collingham, 25. viii. 1913; Epperstone Park, 6. ix. 1913; Widmerpool, 18. viii. 1913 (*Carr*). Lambley, 17. vii. 1911 (*Robinson*).
- M. lumbaris** Sturm. Treswell Wood, 7. v. 1900; on *Spiraea* in garden, Mapperley, Nottingham, 23. vi. 1912 (*Thornley*). Crow Wood Hill, West Leake, 14. vi. 1913 and 17. v. 1914; North Collingham, 25. viii. 1913; Thorney, Aug. 1913.
- M. aeneus** Fab. Common throughout the county.
- M. viridescens** Fab. Sherwood Forest (*Taylor*). Worksop (*Houghton*). South Leverton (*Thornley*). South Wheatley (*Chamberlin*). North Collingham, 25. viii. 1913; Langford Moor, 14. viii. 1914 (*Carr*). Mapperley, Nottingham, 19. vi. 1912 (*Thornley*).
- M. difficilis** Heer. Sherwood Forest, by sweeping, Aug. 1903 (*Taylor*).

- M. morosus** Er. Sherwood Forest (*Blatch*).
M. ochropus Sturm. Sherwood Forest, by sweeping, Aug. 1903 (*Taylor*).
M. flavipes Sturm. In flowers of *Spiraea*, garden at Mapperley, Nottingham, June 1912 (*Thornley*).
M. picipes Sturm. Sherwood Forest, by beating, June 1906 (*Taylor*). Worksop (*Houghton*). Retford district (*Pegler*). South Leverton (*Thornley*). Gedling, 18. v. 1911 (*Robinson*). Mapperley and Sherwood, Nottingham, June 1912-13; Gotham Hills, 28. viii. 1906 (*Thornley and Carr*).
M. murinus Er. Barrow Hills, Everton, common on *Echium*, 15. vi. 1904 (*Thornley*).

CYCHRAMUS Kug.

- C. luteus** Fab. Sherwood Forest, in fungi, with *C. fungicola*, Oct. 1886 (*Blatch and Horner*). Sherwood Forest (*Bedwell, Pegler, Ryles*, etc.). Aspley Woods, Nottingham (*Ryles*).
C. fungicola Heer. Sherwood Forest, in fungi growing in the soil, Oct. 1886 (*Blatch and Horner*); also found in Sherwood Forest by Messrs. Bedwell and Taylor. Treswell Wood (*Thornley*). Nottingham district (*Ryles*).

CRYPTARCHA Shuck.

- C. strigata** Fab. Sherwood Forest (*Tomlin*).

IPS Fab.

- I. quadriguttata** Fab. Sherwood Forest, under bark of logs, Oct. 1886 (*Blatch and Horner*); also taken in same locality by Messrs. Bedwell, Chaster, Taylor and Tomlin.

PITYOPHAGUS Shuck.

- P. ferrugineus** Fab. Sherwood Forest (*Tomlin*); in same locality, under bark of pines (*H. Willoughby Ellis*).

RHIZOPHAGUS Herbst.

- R. cribratus** Gyll. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); taken also in same locality by E. C. Bedwell.
R. depressus Fab. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); taken also by Chaster and Tomlin.

- R. perforatus** Er. Sherwood Forest, June 1889 (*Blatch*).
South Leverton (*Thornley*).
- R. parallelocollis** Gyll. Sherwood Forest (*Fowler, Brit. Coleop.*,
iii. 265). Hucknall Torkard, 1. vi. 1911 (*Robinson*).
- R. ferrugineus** Payk. Sherwood Forest, under bark, Oct.
1886 (*Blatch* and *Horner*); also taken by J. Kidson Taylor.
- R. nitidulus** Fab. Sherwood Forest, under bark, Oct. 1886
(*Blatch* and *Horner*); also in June 1889 (*Blatch*), and
commonly in June 1906 (*Taylor*); taken in same locality
also by Chaster and Tomlin.
- R. oblongocollis** Blatch. Sherwood Forest, under oak bark,
Oct. 1886 and June 1889 (*Blatch*).
- R. dispar** Payk. Sherwood Forest, under bark. Oct. 1886
(*Blatch* and *Horner*); taken in same locality by Bedwell,
Taylor and Tomlin.
- R. bipustulatus** Fab. Sherwood Forest, Oct. 1886, under
bark of logs and stumps, with a remarkable black variety
exactly simulating *R. politus* in colour (*Blatch* and *Horner*);
taken also in the Forest by Messrs. Bedwell, Taylor and
Tomlin. Retford (*Pegler*). South Leverton and Treswell
(*Thornley*).
- R. politus** Hell. Sherwood Forest, under bark, Sept. 1885
(*Blatch*).

TROGOSITIDAE.

NEMOSOMA Latr.

- N. elongatum** L. 'One specimen beaten from bramble
at Colwick near Nottingham, 1828, *Dr. G. Howitt*'
(*Stephens, Illust. Brit. Ent., Mandib.*, iii. 369). 'Beeston,
in old elm rails, etc., Nov. 1871, *J. Sidebotham*' (*Fowler,*
Brit. Coleop., iii. 268; *E.M.M.*, January 1872, p. 180).

TENEBRIOIDES Pill.

- T. mauritanicus** L. Nottingham, in a bakehouse (*Ryles*).
Retford in an old corn mill (*Pegler*).

THYMALUS Latr.

- T. limbatus** Fab. Sherwood Forest, June 1868 (*Taylor*); in
same locality, under bark, Oct. 1886 (*Blatch* and *Horner*);
taken also by Messrs. Bedwell, Chaster, Ryles, Tomlin, etc.

MONOTOMIDAE.

MONOTOMA Herbst.

- M. conicicollis** Aub. Sherwood Forest, in ants' nest, August 1903 (*Taylor*).
M. picipes Hbst. South Leverton, in hot frame (*Thornley*).
M. rufa Redt. Sherwood Forest, in vegetable refuse, Aug. 1903 (*Taylor*).
M. longicollis Gyll. Sherwood Forest, June 1899 (*Blatch*). South Leverton, in hot frame (*Thornley*).

LATHRIDIIDAE.

LATHRIDIUS Herbst.

- L. lardarius** De G. Sherwood Forest (*Tomlin*). Worksop (*Houghton*). Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham district (*Ryles*). Bradmore, 8. ix. 1910; Nuthall, 25. vi. 1914; Radcliffe-on-Trent, 6. v. 1915 (*Robinson*). Park Drain, Misson, 22. ix. 1914.
L. bergrothi Reitt. Nottingham, several specimens found on dried burdock in the herbarium at University College, 13. xi. 1900 (*Carr*, determined by *G. C. Champion*).

CONINOMUS Thoms.

- C. nodifer** West. Sherwood Forest (*Taylor, Tomlin*). Retford district (*Pegler*). South Leverton, quite common in haystack refuse, 13. v. 1899; Car Colston, 11. iv. 1912 (*Thornley*). Nottingham (*Ryles*). Nottingham, in cellar of house, Feb. 1914 (*E. S. Hillman*). Radcliffe-on-Trent, 1. iv.; Strelley, 10. ix.—1914 (*Robinson*). Cuckney Hay Wood, 11. viii. 1914.

ENICMUS Thoms.

- E. minutus** L. Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Leverton, in haystack, in thousands! 13. v. 1899, etc. (*Thornley*). Nottingham, frequent. Papplewick, 28. iv. 1914 (*Robinson*).
E. transversus Ol. Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Leverton; Mapperley, Nottingham, in garden, June 1912 (*Thornley*). Strelley, 10. ix. 1914 (*Robinson*). East Leake, 3. vii. 1911.

- E. rugosus** Herbst. Sherwood Forest, in rotten wood and frass shaken from old bark (*Rev. A. Matthews and W. W. Fowler in Brit. Coleop.*, iii. 284); in same locality (*Taylor*). Sherwood Forest, in a powdery fungus, June 1907 (*Donisthorpe*); also taken from powdery fungi on oaks, May 1913 (*E. W. Morse*).
- E. testaceus** Steph. Sherwood Forest, in numbers in powdery fungus on oak, June 1905 (*Taylor and Chaster*). Tuxford (*Pegler*).
- E. brevicornis** Man. "*E. consimilis* Man." 'Introduced as British by Mr. Crotch on the authority of two specimens in the Rev. A. Matthews' collection, taken, I believe, in Sherwood Forest. Mr. Matthews has kindly given me one of these, and it is certainly nothing more than *E. brevicornis* (*carbonarius*) with the thorax a little less contracted behind than in the ordinary form of that species' (*Fowler, Brit. Coleop.*, iii. 283).

CARTODERE Thoms.

- C. ruficollis** Marsh. Retford district (*Pegler*). Bulcote, Oct. 1899 (*Ryles*).
- C. elongata** Curt. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 286).
- C. filiformis** Gyll. Sherwood Forest (*Tomlin*).
- C. filum** Aub. Nottingham University College, a few examples infesting a dried specimen of burdock in the herbarium, 18. xi. 1900.

CORTICARIA Marsh.

- C. pubescens** Gyll. 'In damp cellars, Nottingham, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Taylor*). Tuxford district (*Pegler*).
- C. crenulata** Gyll. Sherwood Forest, in fungus, June 1905 (*Taylor*).
- C. denticulata** Gyll. Sherwood Forest, (*Fowler, Brit. Coleop.*, iii. 289). Tuxford; Ordsall; Lound (*Pegler*).
- C. serrata** Payk. Sherwood Forest, June 1889 (*Blatch*); in same locality, June 1904, one specimen of dark form in *Boletus* on birch (*Taylor*); also in same locality, under bark, June 1907 (*Donisthorpe*). Clarborough, one example beaten from gorse, 1892 (*Thornley*).

- C. fulva** Com. Sherwood Forest (*Tomlin*). Nottingham, a number of examples from dried specimen of burdock in the herbarium of University College, 13. xi. 1900 (*Carr, teste G. C. Champion*).
- C. elongata** Gyll. Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*). Bulwell, 6. vii. 1911; Cinder-hill, 19. vi. 1913; Stapleford, 13. viii. 1914 (*Robinson*).
- C. eppelsheimi** Reitt. Sherwood Forest, two examples under oak bark, autumn of 1905 (*Tomlin*).
- C. longicollis** Zett. Sherwood Forest, under bark (*Tomlin*).

MELANOPHTHALMA Mots.

- M. gibbosa** Herbst. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar, Aug. 1911; Bingham, 11. iv. 1912 (*Thornley*). Langford Moor, 11. viii. 1914 (*Morley*).
- M. fuscula** Hamm. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*).

CUCUJIDAE.

PEDIACUS Shuck.

- P. dermestoides** Fab. Sherwood Forest (*Bedwell, Chaster, Fowler, Tomlin, etc.*); sparingly under beech bark, June 1906 (*Taylor and Chaster*); plentifully under bark of fallen oak branch, May 1913 (*E. W. Morse*).

LAEMOPHLOEUS Er.

- L. ferrugineus** Steph. Grove near Retford, 1896 (*Pegler*). Worksop (*Houghton*).

PSAMMOECHUS Latr.

- P. bipunctatus** Fab. Clumber (*Pegler*).

SILVANUS Latr.

- S. surinamensis** L. Sherwood Forest, one specimen on an oak gate post, June 1905 (*Taylor*). Retford district (*Pegler*). Mapperley, Nottingham, 30. v. 1914 (*Thornley*).

BYTURIDAE.

BYTURUS Latr.

- B. tomentosus** Fab. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Taylor*). Retford district (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton, common; Treswell Wood, 25. v. 1901; Nottingham, on flowers of *Spiraea* in garden at Mapperley, June 1912; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*), and 17—19. v. and 9. viii. 1914 (*Carr*). Park Wood, Cauntton, in buttercup flowers, 9. vi. 1908; Aldercar Wood, 29. vii. 1914 (*Carr*). Nottingham district (*Ryles, Saunt*). East Leake, 5. vii. 1911 (*Robinson*).

CRYPTOPHAGIDAE.

DIPHYLLUS Steph.

- D. lunatus** Fab. Radcliffe-on-Trent, four specimens, 14. iv. 1910 (*Robinson*).

TELMATOPHILUS Heer.

- T. caricis** Ol. South Leverton (*Thornley*).

ANTHEROPHAGUS Latr.

- A. nigricornis** Fab. Sherwood Forest, on elder blossom, June 1886 (*Blatch*). Budby, July 1899 (*J. Golding*). Hoveringham, 1. vii. 1911; Cinder-hill, 20. vi. 1912; Cotgrave, 27. vi. 1912 (*Robinson*). West Leake, on *Heracleum* flowers, 23. vi. 1912.
- A. pallens** Ol. Sherwood Forest, July 1899 (*J. Golding*). Crow Wood Hill, West Leake, by sweeping, 14. vi. 1913 (*Thornley and Carr*).

CRYPTOPHAGUS Herbst.

- C. lycoperdi** Herbst. Sherwood Forest, in fungi growing on ground, Oct. 1886 (*Blatch and Horner*); in same locality (*Bedwell*). Edwinstowe, Sept. 1909 (*Thornley*). Broadholme (*Pegler*). Nottingham, Sept. 1911 (*Robinson*).
- C. setulosus** Sturm. Sherwood Forest, under bark, June 1906 (*Taylor*). South Leverton; Treswell (*Thornley*).
- C. pilosus** Gyll. South Leverton (*Thornley*). Gamston near Retford (*Chamberlin*).

- C. ruficornis** Steph. Sherwood Forest (*Chaster*).
- C. saginatus** Sturm. Retford district (*Pegler*). South Leverton, in haystack refuse, 13. v. 1899 (*Thornley*).
- C. scanicus** L. Sherwood Forest (*Taylor*). South Leverton, in haystack rubbish, 13. v. 1899 (*Thornley*).
var. *patruelis* Sturm. Sherwood Forest, by beating birch faggots, June 1907 (*Taylor*).
- C. subdepressus** Gyll. Upton near Southwell, beaten from spruce fir, 30. vi. 1913 (*Carr, teste J. J. Walker*).
- C. badius** Sturm. South Leverton, May 1899 (*Thornley*).
- C. dentatus** Herbst. Sherwood Forest, in dead leaves, June 1903 (*Taylor*).
- C. distinguendus** Sturm. Sherwood Forest, by sweeping, June 1903 (*Taylor*). South Leverton, May 1899 (*Thornley*).
- C. acutangulus** Gyll. Retford district (*Pegler*). In garden at Mapperley, Nottingham, 20. iv. 1913 (*Thornley*).
- C. cellaris** Scop. Nottingham (*Ryles*). Retford district (*Pegler*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*).
- C. pubescens** Sturm. Sherwood Forest (*Fowler, Brit. Coleop.*, iii. 325). Sherwood, Nottingham, on sycamore trunk, 12. viii. 1913 (*Carr, teste J. J. Walker*). Langford Moor, 14. viii. 1914 (*Morley*).
- C. bicolor** Sturm. South Leverton, not uncommon in bottom of haystack in vicarage garden, 16. v. 1899 (*Thornley*).

MICRAMBE Thoms.

- M. vini** Panz. Sherwood Forest (*Bedwell, Taylor*). Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham district (*Ryles*).

HENOTICUS Thoms.

- H. serratus** Gyll. Sherwood Forest, under birch bark, 1868 (*J. Kidson Taylor*); in same locality, also under birch bark, June 1889 (*Blatch*).

PARAMECOSOMA Curt.

- P. melanocephalum** Herbst. Cottam, two specimens (*Pegler*).

ATOMARIA Steph.

- A. diluta** Er. Radcliffe-on-Trent, i. iv. 1914 (*Robinson, teste J. J. Walker*).
- A. nigriventris** Steph. Sherwood Forest (*Taylor*). Tuxford (*Pegler*).
- A. elongatula** Er. Sherwood Forest, June 1889 (*Blatch*).
- A. badia** Er. Sherwood Forest, two specimens beaten from oaks, May 1904 (*Taylor*).
- A. fuscipes** Gyll. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Morley*).
- A. nigripennis** Payk. 'Very abundant in cellars, Nottingham, Dr. Howitt' (*Stephens, Ill. Brit. Ent., Mandib., iii. 369*). South Leverton, May 1899 (*Thornley*).
- A. munda** Er. South Leverton, common in haystack litter in vicarage garden, 18. v. 1899; one specimen under lid of sea-kale pot in garden, 30. iii. 1900 (*Thornley*).
- A. fuscata** Schön. Sherwood Forest (*Taylor*). Newark (*Pegler*). South Leverton (*Thornley*).
- A. atra** Herbst. Radcliffe-on-Trent (*Ryles*).
- A. pusilla** Payk. Tuxford (*Pegler*).
- A. atricapilla** Steph. Clumber; Tuxford; Cottam (*Pegler*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Nottingham (*Ryles*).
- A. basalis** Er. Clumber (*Pegler*).
- A. apicalis** Er. Sherwood Forest, in vegetable refuse, June 1906 (*Taylor*). Clumber Park, Aug. 1899 (*Pegler*). South Leverton (*Thornley*). Nottingham, 11. v. 1913 (*H. Hillman*).
- A. analis** Er. Sherwood Forest (*Taylor*). Retford district (*Pegler*). South Leverton, May 1899 (*Thornley*). Bulcote, Oct. 1899 (*Ryles*). Radcliffe-on-Trent, 1. iv. 1914 (*Robinson*).
- A. ruficornis** Marsh. Sherwood Forest, June 1899 (*Blatch*). Clumber (*Pegler*).

EPHISTEMUS Westw.

- E. gyrinoides** Marsh. South Leverton, in haystack refuse, 18. v. 1899 (*Thornley*). Bulcote (*Ryles*).

SCAPHIDIIDAE.

SCAPHIDIUM Ol.

- S. quadrimaculatum** Ol. Sherwood Forest, June 1868 (*Taylor*); in same locality, under bark, Oct. 1886 (*Blatch* and *Horner*); under rotten bark and decaying stumps, April 1893 (*Fowler*); also taken in the Forest by Chaster and Tomlin. Langford Moor near Newark, Aug. 1897.

SCAPHISOMA Leach.

- S. agaricinum** L. Sherwood Forest, under bark, Oct. 1886 (*Blatch* and *Horner*); taken in same locality by Messrs. Bedwell, Taylor and Tomlin. Retford (*Pegler*).
- S. boleti** Panz. Sherwood Forest, under bark, October 1886 (*Blatch* and *Horner*).

MYCETOPHAGIDAE.

TYPHAEA Curt.

- T. fumata** L. 'Extremely abundant in decayed wood in the deep rock cellars at Nottingham in October and November, *Dr. Howitt*' (*Stephens*). Nottingham (*Dodd*, *Robinson*, *Ryles*, etc.). Stoke Bardolph (*Carr*). South Leverton, abundant in haystack refuse and on stable windows (*Thornley*).

TRIPHYLLUS Latr.

- T. suturalis** Fab. Sherwood Forest, in decaying fungus, June 1868 (*Taylor*); in same locality, under bark, Oct. 1886 (*Blatch* and *Horner*). Retford district (*Pegler*). Barrow Hills, Everton (*Chamberlin*). Newark (*Ryles*).
- T. punctatus** Fab. Sherwood Forest, in decaying fungus, June 1868 (*Taylor*); in same locality, under bark, Oct. 1886 (*Blatch* and *Horner*).

LITARGUS Er.

- L. bifasciatus** Fab. Clifton Grove near Nottingham (*Ryles*). Crow Wood Hill, West Leake, by sweeping, 14. vi. 1913, and commonly in a felled ash-tree, 15. iv. 1914 (*Thornley*).
- L. coloratus** Rosenh. 'Mr. J. Ray Hardy took fourteen specimens of this species [new to Britain] in June 1907, in Sherwood Forest, from a fungus growing on a dead holly log, and from the leaves about it' (*Tomlin* and *Joy*, *E.M.M.*, May 1908, p. 104).

MYCETOPHAGUS Hell.

- M. quadripustulatus** L. Sherwood Forest (*Fowler, Taylor, Tomlin*). Worksop (*Houghton*). Retford district (*Pegler*). South Wheatley (*Chamberlin*). South Leverton; Kingston Park, in *Polyporus*, 23. viii. 1905: very abundant there in Aug. 1911 (*Thornley*). Aspley Woods near Nottingham (*Ryles*). Clifton Grove, common, 9. x. 1909.
- M. piceus** Fab. Sherwood Forest, in fungi on old trees and stumps, Oct. 1886 (*Blatch and Horner*); also taken in the Forest by Messrs. Taylor and Tomlin. Lound Hall near Retford (*Pegler*).
- M. atomarius** Fab. Clifton Grove near Nottingham (*Ryles*).
- M. quadriguttatus** Müll. Retford, several examples in an old corn mill (*Pegler*).
- M. multipunctatus** Hell. Littleborough (*Thornley and Pegler*).

DERMESTIDAE.

DERMESTES L.

- D. vulpinus** Fab. Nottingham, in bone works (*Ryles*). Retford, in bone works (*Pegler and Thornley*). Worksop (*Houghton*).
- D. murinus** L. 'Newstead and Mansfield Forests, in dead birds, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Ryles, Taylor, Tomlin*). Clumber (*Pegler*). Barrow Hills, Scaftworth, in dead rook (*Chamberlin and Carr*). Aspley Woods, Nottingham (*Ryles*). Kingston-upon-Soar, August 1911 (*Thornley*). Roe Wood, Winkburn, common on dead stoats and weasels, 25. iv. 1914.
- D. lardarius** L. 'Extremely common in Notts., *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Taylor*). Worksop (*Houghton*). Retford district (*Pegler*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Nottingham, very abundant in hide warehouse (*Carr*). Nottingham (*Ryles, Saunt, etc.*).

ATTAGENUS Latr.

- A. pellio** L. 'Common in fellmongers' warehouses, etc., at Nottingham, *Dr. Howitt*' (*Stephens*). Sherwood Forest near Edwinstowe (*Carr*); also taken in the Forest by J. K. Taylor. North Wheatley (*Chamberlin*). North Leverton; South Leverton, in vicarage, also in mountain-ash and hawthorn flowers; Kingston; Mapperley, Nottingham, in

house, 14. iii. 1912, and on flowers of *Spiraea* in garden, June 1912 (*Thornley*). Nottingham district (*Ryles*).

MEGATOMA Herbst.

M. undata L. 'Once taken in an old ash tree near Nottingham, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Fowler, Ryles, Taylor*). Retford district (*Pegler*).

TIRESIAS Steph.

T. serra Fab. Sherwood Forest: taken by J. Ray Hardy in 1868, and by J. Kidson Taylor in 1870; also by W. G. Blatch in June 1889, and more recently by E. C. Bedwell and others. Mr. Kidson Taylor again took it, by beating oak, in July 1904, and in the following year obtained a number under oak bark, as well as several larvae from which the perfect beetles were bred. In June 1912 *Dr. Randell Jackson* and I saw many larvae under loose bark of old oaks in the Forest near Edwinstowe.

FLORILINUS Muls.

F. musaeorum L. 'Common at Nottingham, *Dr. Howitt*' (*Stephens*). North Leverton, one, 3. vi. 1901 (*F. Shaw*).

HELOCERUS Muls.

H. claviger Er. Worksop (*Houghton*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, sometimes swarms in parsley flowers; Mapperley, Nottingham, on *Spiraea* flowers in garden, 23. vi. and 14. vii. 1912 (*Thornley*). Nottingham and Bulwell, July 1898-99 (*B. S. Dodd*).

BYRRHIDAE.

BYRRHUS L.

B. pilula L. 'Very common in Notts., *Dr. Howitt*' (*Stephens*). Nottingham and Retford districts (*Ryles* and *Thornley*). North Wheatley and North Leverton (*Chamberlin*). Bils-thorpe, 17. v. 1908; Rolleston, 18. v. 1908 (*Thornley*). Nottingham, frequent.

B. fasciatus Fab. 'Common in Notts., *Dr. Howitt*' (*Stephens*).

B. dorsalis Fab. Sherwood Forest, 22. vi. 1907 (*Donisthorpe*).

B. murinus Fab. 'Nottingham, once taken, *Dr. Howitt*' (*Stephens, Illust. Brit. Ent., Mandib., iii. 371*).

CYTILUS Er.

C. varius Fab. South Leverton, one example, 1895 (*Thornley*).

SIMPLOCARIA Marsh.

S. semistriata Fab. 'In dry banks in the autumn in Notts., *Dr. Howitt*' (*Stephens*). Retford district (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton (*Thornley*). Nottingham; Aspley Woods, in moss, 4. x. 1899 (*Ryles*). Worksop, April and May 1914 (*Hodding*).

ASPIDIPHORUS Latr.

A. orbiculatus Gyll. Sherwood Forest, June 1870 (*Taylor*); in same locality, June 1889 (*Blatch*); frequent about fungi in the Forest, June 1906 (*Taylor*); taken also by Chaster and Tomlin.

PARNIDAE.

ELMIS Latr.

E. aeneus Müll. Treswell and West Burton near Retford, on stones in becks (*Thornley*).

E. cupreus Müll. In a beck at Treswell (*Thornley*).

PARNUS Fab.

P. prolifericornis Fab. Beeston (*Ryles*).

P. auriculatus Panz. Sherwood Forest (*Tomlin*).

HETEROCERIDAE.

HETEROCERUS Fab.

H. marginatus Fab. Barton-in-Fabis near Nottingham (*fide Ryles*).

LUCANIDAE.

DORCUS McL.

D. parallelopipedus L. 'Extremely abundant in the roots of decaying ashes in the spring, *Dr. Howitt*' (*Stephens*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). Worksop (*Houghton*). Wollaton, 1892 (*H. N. Browne*). Clifton Grove (*Ryles*).

SINODENDRON Fab.

- S. cylindricum** L. 'Common in decayed ash and willow trees all the year, *Dr. Howitt*' (*Stephens*). The Coppice, Nottingham (*W. Allen, Ent. Wkly. Intell.*, June 14, 1856). Nottingham; Aspley; Radcliffe-on-Trent; Clifton; Woodborough (*Ryles*). Worksop (*H. F. Hodding*, 1912). South Leverton (*Thornley*).

SCARABAEIDAE.

ONTHOPHAGUS Latr.

- O. ovatus** L. Mansfield, *Dr. G. Howitt* (*Stephens, Mandib.*, iii. 372).
- O. coenobita** Herbst. 'Rare near Nottingham, *Dr. G. Howitt*' (*Stephens, l.c.*).
- O. nuchicornis** L. 'Abundant in the spring; and in the autumn of 1830, *Dr. Howitt*' (*Stephens, l.c.*). Retford district (*Pegler*).

APHODIUS Ill.

- A. erraticus** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Trent-side, Nottingham, 2. v. 1913.
- A. subterraneus** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Nottingham district (*Ryles, Dodd*). Retford district (*Pegler*). North and South Leverton (*Thornley*).
- A. fossor** L. 'Very common in Notts., *Dr. Howitt*' (*Stephens*). Nottingham district (*Ryles*). Retford district, common (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Kingston-upon-Soar, Aug. 1911 (*Thornley*).
- A. haemorrhoidalis** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles*). Trent-side, Nottingham, 2. v. 1913.
- A. foetens** Fab. Nottingham; Lenton; Aspley (*Ryles*). Nottingham, 1900 (*Dodd*). South Leverton (*Thornley*). Trent-bank, West Burton (*Pegler*).
- A. fimetarius** L. 'Common in Notts., *Dr. Howitt*' (*Stephens*). Retford district (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Sutton-in-Ashfield, 8. iv. 1909; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles*). Bulwell (*Robinson*). Trent-side, Nottingham, 2. v. 1913 (*Carr*). East Leake, 20. iv. 1913 (*Saunt*).

- A. scybalarius** Fab. 'Notts., common, *Dr. Howitt*' (*Stephens*). Nottingham district (*Ryles* and *Dodd*). Retford (*Pegler*).
- A. ater** De G. Retford district (*Thornley* and *Pegler*). West Burton (*Chamberlin*). Nottingham district (*Ryles* and (*Thornley*)). Kingston-upon-Soar (*Thornley*). Arnold, 14. v. 1914 (*Robinson*).
- A. constans** Duft. Laneham near Retford (*Chamberlin*). Colwick, fairly common in early spring (*Ryles*). Trent-side, Nottingham, 2. v. 1913.
- A. granarius** L. South Leverton, 17. v. 1900 (*Thornley*). Beeston; Hazleford (*Ryles*).
- A. rufescens** Fab. Nottingham district (*Ryles*). Trent-bank, West Burton (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar; Radcliffe-on-Trent (*Thornley*).
- A. porcus** Fab. 'Not uncommon near Nottingham, *Dr. Howitt*' (*Stephens*). Clumber, 1895 (*Pegler*).
- A. tristis** Panz. Sherwood Forest, under a dead bird, June 1907 (*Taylor*).
- A. pusillus** Herbst. Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham, June 1899 (*Dodd*). Thrumpton (*Ryles*).
- A. merdarius** Fab. 'Very common during the summer months, *Dr. Howitt*' (*Stephens*). Retford district (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Nottingham district (*Ryles*).
- A. inquinatus** Fab. Sherwood Forest (*Blatch*, *Chaster*, *Taylor*). Worksop (*Houghton*). Retford district (*Thornley* and *Pegler*). Nottingham district (*Ryles*).
- A. sticticus** Panz. Retford (*Pegler*). South Leverton, common in 1895; abundant in horse-droppings in vicarage field, 2. v. 1900 (*Thornley*).
- A. punctato-sulcatus** Stm. Retford district (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Worksop (*Houghton*). Nottingham district (*Ryles*, *Robinson*, *Saunt*). Trent-side, Nottingham, 2. v. 1913.
- A. prodromus** Brahm. Sherwood Forest (*Taylor*). Retford district (*Thornley* and *Pegler*). Nottingham district (*Ryles*). Trent-side, Nottingham, 2. v. 1913.
- A. contaminatus** Herbst. Common everywhere.

- A. luridus** Fab. 'Nottingham, common, *Dr. Howitt*' (*Stephens*). Nottingham (*Ryles*). Retford (*Pegler*). South Leverton, some years common, with the black variety; North Leverton, 18. v. 1901 (*Thornley*). Gamston, near Retford, 22. v. 1906.
- A. rufipes** L. 'Common near Nottingham, *Dr. Howitt*' (*Stephens*). Budby, Sherwood Forest, July 1899 (*J. Golding*). Worksop (*Houghton*). Retford district, common in autumn (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Wellow Park, 20. ix. 1911 (*Thornley* and *Carr*). Huthwaite; Nottingham; Kingston; Beeston (*Thornley*). Carlton near Nottingham, 28. viii. 1912 (*Saunt*). Stapleford (*Dawson*).
- A. depressus** Kug. South Leverton (*Thornley*).

HEPTAULACUS Muls.

- H. villosus** Gyll. Radcliffe-on-Trent, 1913 (*Thornley, teste J. J. Walker*).

OXYOMUS Lap.

- O. porcatus** Fab. Nottingham, 7. iv. 1912 (*Robinson*).

GEOTRUPES Latr.

- G. typhoeus** L. 'Common throughout the Forest district of Notts., *Dr. Howitt*' (*Stephens*). A fine specimen of the chestnut-coloured variety, captured at Lowdham 25. iv. 1904, was sent to me by Mr. C. E. Pearson, F.L.S.
- G. spiniger** Marsh. Sherwood Forest, in dung, June 1906 (*Taylor*). Retford district, sparingly (*Thornley* and *Pegler*). North and South Wheatley, common (*Chamberlin*). Nottingham, frequent; Kingston-upon-Soar (*Thornley*).
- G. stercorarius** L. 'Common in the Trent meadows, *Dr. Howitt*' (*Stephens*). Retford district, common (*Thornley* and *Pegler*). North and South Wheatley, common (*Chamberlin*). Nottingham and surrounding district, common. Kingston-upon-Soar (*Thornley*). Annesley (*Saunt*).
- G. sylvaticus** Panz. Nottingham district (*Ryles*). Mapperley, Nottingham (*Thornley*). Burton Joyce and Lambley (*vide Ryles*). North Wheatley, 11. ix. 1901 (*Chamberlin*).
- G. vernalis** L. 'Mansfield forest, *Dr. G. Howitt*' (*Stephens*). 'Thirty-four specimens taken in Sherwood Forest' (*Wm. Howitt, Book of the Seasons*, p. 108).

TROX Fab.

- T. scaber** L. Sherwood Forest, one specimen in a bone, June 1903 (*Taylor*). Retford district (*Pegler*). Nottingham (*Saunt, Thornley*). Nottingham district (*Ryles*).

HOPLIA Ill.

- H. philanthus** Füss. 'Rare near Nottingham, *Dr. Howitt*' (*Stephens*). Notts. (*Fowler, Brit. Coleop.*, iv. 48).

SERICA McL.

- S. brunnea** L. 'Occasionally taken in the Forest, *Dr. Howitt*' (*Stephens*). Budby, Sherwood Forest, July 1899 (*Golding*). Retford and Clumber (*Pegler*). Worksop (*Houghton*). Barrow Hills, Everton, several dead specimens in spiders' webs (*Chamberlin*). Frequent at Nottingham.

RHIZOTROGUS Latr.

- R. solstitialis** L. 'Extremely abundant towards the end of June and beginning of July in Nottingham Park and the field to the north of the town, *Dr. Howitt*' (*Stephens*). Still sometimes abundant in and around Nottingham. Worksop (*Houghton*).

MELOLONTHA Fab.

- M. vulgaris** Fab. 'Common in Notts., *Howitt*' (*Stephens*). Sherwood Forest (*Taylor*). Worksop (*Houghton*). Wheatley, common (*Chamberlin*). Retford district; Treswell Wood; South Leverton, etc., very common in this district in 1899, careering over the lilac bushes at twilight by dozens: the cats were seen catching and eating them (*Thornley*). Nottingham district, common.

PHYLLOPERTHA Kirb.

- P. horticola** L. 'Notts., very common; the dark varieties not uncommon during the summer of 1830, *Dr. Howitt*' (*Stephens*). Sherwood Forest (*Taylor*); in same locality, with the black variety, June 12—17, 1912 (*Dr. A. R. Jackson*). Retford district, some years very common (*Thornley*). Worksop (*Houghton*). Barrow Hills, Everton; North Wheatley; common (*Chamberlin*). Papplewick and Hucknall Torkard, 5. vi. 1913 (*Robinson*). Nottingham; Bulwell Forest; etc., some years very abundant; Wysall, very common; Langford Moor.

CETONIA Fab.

- C. aurata** L. 'Mansfield, Dr. G. Howitt' (*Stephens, Illust. Brit. Ent., Mandib.*, iii. 374). 'Some hundreds of specimens have been captured in this county' (*Wm. Howitt, Book of the Seasons*). Not seen by any modern collector.

BUPRESTIDAE.

AGRILUS Sol.

- A. biguttatus** Fab. Sherwood Forest, July 1908, over 60 specimens taken from borings in bark of large oak tree, and on trunk and low branches and on bracken later in the day. 'Not taken in Britain for about 30 years, this being the first record for the Midlands' (*H. St. J. K. Donisthorpe, E.M.M.*, Nov. 1908, p. 259, and *Ent. Record*, 1908, p. 237).
- A. laticornis** Ill. Treswell Wood, two specimens swept 15. vii. 1899 (*Pegler and Thornley*). Sherwood Forest, several beaten from oaks, Aug. 1903 (*Taylor*).
- A. angustulus** Ill. Sherwood Forest (*Tomlin*).

EUCNEMIDAE.

THROSCUS Latr.

- T. dermestoides** L. Sherwood Forest (*Matthews, Chaster, Tomlin*); in same locality, in numbers (*Ryles*); by sweeping, June 1907 (*Taylor*). Worksop (*Houghton*). Nottingham district (*Ryles*). Langford Moor near Newark, common, 29. vi. 1899 (*Thornley and Carr*).

MELASIS Ol.

- M. buprestoides** L. Sherwood Forest (*Bedwell, Tomlin*).

ELATERIDAE.

LACON Lap.

- L. murinus** L. Nottingham (*Ryles*). Oxtou Bogs, 7. vi. 1911 (*Saunt*). Retford (*Thornley and Pegler*). North Wheatley (*Chamberlin*).

CRYPTOHYPNUS Esch.

- C. riparius** Fab. Clumber (*Pegler*). West Burton (*Chamberlin*).

Trent-bank, Rampton, 18. vii. 1899 and 8. vi. 1906 (*Chamberlin, Thornley*). Trent-bank, Nottingham, 2. v. 1913, etc.

C. quadripustulatus Fab. Nottingham district (*Ryles*).

ELATER L.

E. lythropterus Germ. Sherwood Forest, June 1870 (*Taylor*); in same locality (*Chaster, Tomlin*).

E. coccinatus Rye. Sherwood Forest, in an oak stump (*Blatch*).

E. miniatus Gorham. Sherwood Forest, *J. R. Hardy* (*Rye, E.M.M.*, April 1873, p. 268; also *Entom. Annual*, 1874, p. 97, where they are described as 'dug out of birch'). Sherwood Forest, beaten off young birches, June 1905 (*Taylor*); also taken by Donisthorpe, 24. vi. 1907.

E. pomorum Herbst. Sherwood Forest, taken by Messrs. Blatch and Horner, Chaster, Fowler, Taylor, etc.

E. balteatus L. Sherwood Forest, beaten from young birches, June 1905 (*Taylor*); also taken in same locality by E. C. Bedwell. Sherwood Rise, Nottingham, 6. vi. 1906 (*vide Thornley*).

MELANOTUS Esch.

M. rufipes Herbst. Sherwood Forest (*Bedwell, Chaster, Taylor, Tomlin* and others). Retford district (*Thornley and Pegler*). Stapleford (*Dawson*). Nottingham, frequent; Radcliffe-on-Trent, 25. v. 1912.

M. castanipes Payk. Sherwood Forest (*Janson in Ent. Ann.* 1856, pp. 82—92). 'There were also some specimens in Mr. Truman's Sherwood Forest collection' (*Fowler, Brit. Coleop.*, iv. 97).

ATHOUS Esch.

A. rhombeus Ol. Sherwood Forest, under bark of old oaks: taken by Mr. Kidson Taylor in June 1868, and subsequently by Messrs. Bedwell, Blatch, Chaster, Randell Jackson, Taylor, Carr, etc.

A. niger L. Sherwood Forest (*Bedwell, Taylor*). Retford district and Clumber (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, by beating hedges; Beeston; Kingston-upon-Soar, 24. vii. 1912 (*Thornley*). Nottingham district (*Ryles*). Nottingham, 18. vii. 1912.

- A. longicollis** Ol. South Leverton, not uncommon, but ♀ only once; Trent-bank, Cottam, 14. vii. 1899; Kingston-upon-Soar, 24. vii. 1912 (*Thornley*). Nottingham; Fiskerton (*Ryles*). Kirkby-in-Ashfield, 19. vii. 1913.
- A. haemorrhoidalis** Fab. Common everywhere in Notts.
- A. vittatus** Fab. Clumber, one example, Aug. 1899 (*Pegler*). Nottingham district (*Ryles*). Nottingham (*Saunt*).

LIMONIUS Esch.

- L. minutus** L. Sherwood Forest, beaten from oaks, June 1903 (*Taylor*); taken in same locality by Messrs. Bedwell, Ryles and Tomlin. Worksop (*Houghton*). Barrow Hills, Everton (*Chamberlin*). South Leverton; Treswell Wood; Rampton (*Thornley*). Lambley (*vide Ryles*). Radcliffe-on-Trent, 25. v. 1912; Crow Wood Hill, West Leake, 19. v. 1914.

ADRASTUS Esch.

- A. limbatus** Fab. Sherwood Forest (*Taylor*); near Edwinstowe, June 1912 (*Dr. A. R. Jackson*). Wheatley; Barrow Hills, Everton (*Chamberlin*). South Leverton; Cottam, 14. vii. 1899 (*Thornley*). Nottingham (*Ryles*). Aspley Woods, common, May 11 to July 9, 1912; East Leake, 26. v. 1912; Quarry Banks, Linby, 20. vii. 1914 (*Carr*). Arnold and Bulwell, May 1914 (*Robinson*).
- A. pusillus** Fab. Nottingham, 1912 (*Saunt*).

AGRIOTES Esch.

- A. sputator** L. Retford district, common (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Nottingham; Kingston-upon-Soar (*Thornley*). Quarry Banks, Linby; Trent-side, Nottingham, 2. v. 1913.
- A. obscurus** L. Sherwood Forest (*Bedwell, Tomlin*). Retford district, common (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Beauvale, June 1895 (*Golding*). Nottingham; Bulwell; Bingham; etc. (*Carr*). Kingston-upon-Soar (*Thornley*). Chilwell, 12. v. 1907 (*H. G. Oliver*).
- A. lineatus** L. Sherwood Forest (*Ryles*). Sherwood Rise, Nottingham (*Thornley*). Nottingham district, on Trent-banks, abundant (*Ryles*).
- A. sobrinus** Kies. Sherwood Forest (*Tomlin*). Retford district (*Pegler*). South Leverton; Treswell Wood; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*).

- A. pallidulus** Ill. Sherwood Forest (*Bedwell, Taylor, Tomlin*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Langford Moor, 29. vi. 1899 (*Thornley and Carr*). East Bridgford, 11. vi. 1914 (*Robinson*). Nottingham district (*Ryles*). Aspley Woods, 9. vii. 1912.

DOLOPIUS Esch.

- D. marginatus** L. Sherwood Forest (*Bedwell, Jackson, Ryles, Taylor, Tomlin*, etc.). The Birklands, Edwinstowe, on birch, 1. vii. 1911 (*Carr*). Langford Moor, common, 29. vi. 1899 (*Thornley*). Nottingham (*Ryles, Saunt*). Arnold, 4. vi. 1914 (*Robinson*). West Leake, 19. v. 1914.

CORYMBITES Latr.

- C. pectinicornis** L. Wellow, 1909 (*Rev. W. Becher*). Worksop (*Houghton*). Retford (*Pegler*). Grove (*Rev. G. Shipton, teste Thornley*). North Wheatley (*Chamberlin*). Barton (*Ryles*). Bulwell Forest.

- C. cupreus** Fab. In garden at Carrington, Nottingham, June 1906 (*Thornley*). Nottingham (*Ryles*). North Wheatley (*Chamberlin*).

var. *aeruginosus* Fab. Nottingham, with the type (*Ryles*).

- C. tessellatus** Fab. Southwell, 1899 (*Ryles*).

- C. quercus** Gyll. Sherwood Forest (*Taylor*). Worksop (*Houghton*). West Burton; Rampton, 8. vi. 1906 (*Thornley and Chamberlin*). Nottingham (*Ryles, Robinson*). Radcliffe-on-Trent, 21. vi. 1913 (*Thornley and Carr*).

var. *ochropterus* Steph. Nottingham, with type (*Ryles*). Radcliffe-on-Trent, 27. v. 1912 (*Robinson*).

- C. holosericeus** Fab. Sherwood Forest (*Ryles, Taylor*); also taken by Dr. Randell Jackson, June 12—17, 1912.

- C. aeneus** L. Sherwood Forest (*Bedwell, Chaster, Fowler, Taylor, Carr*, etc.). Nottingham, one specimen in General Cemetery (*Ryles*). Bulwell Forest, 3. vi. 1899 (*Carr*), and one in same locality, 1912 (*F. Hind*).

- C. metallicus** Payk. Wheatley near Retford, 1906 (*Chamberlin*).

- C. bipustulatus** L. Sherwood Forest (*Turner : Fowler, Brit. Coleop.*, iv. 115).

CAMPYLUS Fisch.

- C. linearis** L. Sherwood Forest (*Bedwell, Taylor*). Treswell and Gringley Woods near Retford (*Thornley*). Nottingham; Aspley; Hazleford (*Ryles*).

DASCILLIDAE.**DASCILLUS** Latr.

- D. cervinus** L. Clumber (*Pegler*). North Wheatley (*Chamberlin*). Near Newbound Mill Teversall, 26. vi. 1913 (*Carr*). Nottingham, in the High School playground (*Ryles*).

HELODES Latr.

- H. minuta** L. Sherwood Forest (*Bedwell*). Retford district, common (*Thornley* and *Pegler*). Upton near Southwell, 30. vi. 1913 (*Carr*). Arnold, 4. vi. 1914 (*Robinson*).

MICROCARA Thoms.

- M. livida** Fab. Retford district, sparingly (*Thornley* and *Pegler*). Warsop, 14. vii. 1913 (*Carr*). Nottingham district (*Ryles*). Bassingfield near Gamston, 2. vii. 1914 (*Robinson*).

CYPHON Payk.

- C. coarctatus** Payk. Radcliffe-on-Trent, 12. vi. 1913 (*Robinson*).
- C. nitidulus** Thoms. Sherwood Forest, by sweeping in marshy places, June 1905 (*Taylor*). Lenton, 29. v. 1913; Papplewick, 5. vi. 1913 (*Robinson*). Fiskerton, by sweeping in marshy place by side of railway, 25. vii. 1913.
- C. variabilis** Thunb. Sherwood Forest (*Taylor*). Retford district (*Thornley* and *Pegler*). Nottingham district (*Ryles*). Gamston; East Bridgford (*Robinson*). Upton near Southwell, 30. vi. 1913; Fiskerton, 25. vii. 1913.

PRIONOCYPHON Redt.

- P. serricornis** Müll. Sherwood Forest (*Matthews*); taken in same locality in June 1870, and again in June 1904, when three specimens were beaten from old oaks (*J. Kidson Taylor*).

SCIRTES Ill.

- S. hemisphaericus** L. Sutton near Retford, abundant amongst *Equisetum* (Thornley). Bulwell, 6. vii. 1912 (Robinson). Bulwell Forest, by sweeping amongst grass and *Equisetum*, 21. vii. 1913.

LYCIDAE.

PYROPTERUS Muls.

- P. affinis** Payk. Sherwood Forest. Taken in June 1868 by Mr. J. Kidson Taylor (*E.M.M.*, Jan. 1869 and Sept. 1870); bred from Sherwood Forest larvae by Mr. J. R. Hardy (*E.M.M.*, Aug. 1869), and Mr. J. R. le B. Tomlin; taken by Rev. A. Matthews and Mr. E. C. Bedwell; many specimens taken in June 1906 from the dry rotten debris of an old oak stump, either crawling sluggishly about or hiding in the crevices of the bark (*J. Kidson Taylor* and *G. W. Chaster*). 'I captured a considerable number [in Sherwood Forest, July 1908] . . . Most of them were at the foot of a large tree, on and under dead leaves and bits of bark, but I swept other specimens off bracken in various parts of the Forest' (*Donisthorpe, Ent. Rec.*, Oct. 1908, p. 237).

PLATYCIS Thoms.

- P. minutus** Fab. Treswell Wood, one example, 12. ix. 1894 (Thornley). High Park Woods, Greasley, Sept. 1910.

LAMPYRIDAE.

LAMPYRIS L.

- L. noctiluca** L. Nottinghamshire (*Wm. Howitt, Book of the Seasons*, 1830). Sherwood Forest, 1868 (*R. and W. Tyrer*); taken in the Forest also by Blatch, Chaster, Ryles, Taylor, etc. Budby, Sherwood Forest, commonly, 23. vii. 1912 (*Houghton*). Retford district (*Pegler*).

TELEPHORIDAE.

PODABRUS Westw.

- P. alpinus** Payk. Sherwood Forest (*Fowler, Brit. Coleop.*, iv. 133). Aspley near Nottingham (*Ryles*).

TELEPHORUS Schaeff.

- T. rusticus** Fall. Sherwood Forest (*Bedwell, Taylor*). Worksop (*Houghton*). Retford district (*Pegler, Thornley*). North Wheatley (*Chamberlin*). Rampton, in profusion, 8. vi. 1906; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Nottingham district (*Ryles, Carr*). Bulwell; Papplewick, 5. vi. 1913 (*Robinson*). Epperstone Park, 29. v. 1911 (*Saunt*). West Leake, 2. vi. 1913.
- T. lividus** L. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Retford district; Rampton; Laxton; Thrumpton, 18. v. 1912 (*Thornley*). Sturton-le-Steeple (*Chamberlin*). Stapleford (*Dawson*). Nottingham district (*Ryles*). Radcliffe-on-Trent, 27. v. 1912; Holme Pierrepont, 18. vi. 1914 (*Robinson*). East Leake, 19. v. 1912; Besthorpe, 13. vi. 1914.
- T. pellucidus** Fab. Sherwood Forest (*Taylor*). Retford district (*Pegler*). Treswell Wood, 27. vi. 1899, etc.; East Park Wood, Laxton, 15. vi. 1906; Langford Moor, common, 29. vi. 1899 (*Thornley*). Aspley Woods (*Ryles, Carr*). Cinder-hill, 19. vi. 1913 (*Robinson*).
- T. nigricans** Müll. Sherwood Forest (*Bedwell, Taylor*). Worksop (*Houghton*). Retford district, common (*Pegler, Thornley*). Nottingham district (*Ryles*). Nottingham; Wilford; Hucknall Torkard; 5—9. vi. 1913; Tollerton, by canal, 25. v. 1911; Papplewick, 1. vi. 1914; West Leake, 1. vi. 1915 (*Robinson*). Radcliffe-on-Trent, 25. v. 1912 (*Carr*).
- var. *discoideus* Steph. Sherwood Forest (*Bedwell, Taylor*). Retford district (*Pegler, Thornley*). Nottingham; Hucknall Torkard, 1. vi. 1911 (*Robinson*). Oxtun and Epperstone (*Saunt*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Carr and Thornley*).
- T. obscurus** L. Sherwood Forest (*Blatch and Turner, Bedwell, Chaster, Taylor, etc.*). Retford district (*Pegler*). Nottingham (*Ryles*).
- T. lituratus** Fall. Sherwood Forest (*Bedwell, Taylor*). Worksop (*Houghton*). Retford district (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Markham Clinton (*Miss M. C. Atkinson*). Rampton (*Thornley and Chamberlin*). Nottingham district (*Ryles*). Beeston (*Thornley*). Attenborough; Basford; Gamston; East Bridgford; Hucknall (*Robinson*). Adbolton near Nottingham, 26. vi. 1913 (*Mottram*). Besthorpe, 13. vi. 1914.
- T. bicolor** Fab. Sherwood Forest (*Taylor, Jackson*). Barrow Hills, Everton (*Chamberlin*). Retford district (*Thornley*).

- Pegler*). Nottingham district (*Ryles*, etc.). Radcliffe-on-Trent, 16. vi. 1910; Basford, 6. vi. 1911; Papplewick, 5. vi.; Cinder-hill, 19. vi.; Attenborough, 26. vi.—1913; Arnold, 4. vi. 1914 (*Robinson*). Crow Wood Hill, West Leake, 14. vi. 1913; Kingston-upon-Soar (*Thornley and Carr*).
- T. haemorrhoidalis** Fab. South Leverton, common on hawthorn (*Thornley*). Retford (*Pegler*). Nottingham (*Ryles*). Aspley Woods, common, 18. v.—27. vi. 1912; Radcliffe-on-Trent, 25. v. 1912; Crow Wood Hill, West Leake, 27. v. 1913 and 19. v. 1914 (*Carr*). East Bridgford, 11. vi. 1914; Nuthall, 24. v. 1915 (*Robinson*).
- T. oralis** Germ. South Leverton (*Thornley*). Nottingham (*Ryles*).
- T. paludosus** Fall. Sherwood Forest, one specimen by sweeping, June 1908 (*Bedwell*). Near Newbound Mill, Teversall, two specimens by sweeping, 26. vi. 1913.
- T. flavilabris** Fall. Retford district (*Thornley and Pegler*). Nottingham (*Saunt*). Clifton; Fiskerton (*Ryles*). Upton near Southwell, 30. vi. 1913; Besthorpe, 13. vi. 1914.
- T. thoracicus** Ol. Nottingham, one example (*Pope, teste Ryles*).

RHAGONYCHA Esch.

- R. fuscicornis** Ol. South Leverton, once (*Thornley*). Colwick near Nottingham (*Ryles*).
- R. fulva** Scop. Worksop (*Houghton*). Retford district, abundant (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Nottingham district (*Ryles, Dodd, etc.*). Plumtree, 20. vii. 1911; East Leake, 5. vii. 1911 (*Robinson*). Gotham, 9. viii. 1912 (*Thornley*). Rufford, 3. viii. 1914 (*Saunt*). Crow Wood Hill, West Leake, 24. vii. 1912.
- R. testacea** L. Treswell and Gringley Woods near Retford (*Thornley*). Aspley Woods and Colwick (*Ryles*). Crow Wood Hill, West Leake, 14. vi. 1913; Kirkby Dumbles, 28. vi. 1913 (*Carr and Thornley*).
- R. limbata** Thoms. Common throughout the county.
- R. pallida** Fab. Sherwood Forest, June 1912 (*Dr. Jackson*). Worksop (*Houghton*). Treswell Wood, 25. v. 1901; Langford Moor, 29. vi. 1899; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*). Nottingham district (*Ryles*). Epperstone Park (*Saunt*). Nuthall, 25. vi. and 9. vii. 1914 and 24. v. 1915 (*Robinson*).

MALTHINUS Latr.

- M. punctatus** Fourc. Sherwood Forest (*Taylor, Tomlin*). Worksop (*Houghton*). South Leverton; Langford Moor (*Thornley*). Aspley Woods (*Ryles*). Thorney, Aug. 1913 (*L. A. Carr*). Near Newbound Mill, Teversall, 26. vi. 1913; East Leake, 30. vi. 1912.
- M. fasciatus** Ol. Sherwood Forest (*Ryles, Taylor, Tomlin*). Langford Moor, near Newark, 29. vi. 1899 (*Thornley*).
- M. frontalis** Marsh. Sherwood Forest, beaten from oak and birch (*Donisthorpe, Taylor, Tomlin*).

MALTHODES Kies.

- M. marginatus** Latr. Sherwood Forest (*Taylor, and 23. vi. 1907, Donisthorpe*). Retford district (*Thornley*). Nottingham (*Ryles*).
- M. flavoguttatus** Kies. Aspley Woods, a pair, 28. v. 1912.
- M. minimus** L. Retford district, very common (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Near Newbound Mill, Teversall, 28. vi.; Warsop, 14. vii.; Upton near Southwell, 30. vi.—1913; Aspley Woods near Nottingham, very common, 28. v.—4. vii. 1912; Radcliffe-on-Trent, 21. vi. 1913; West Leake, 14. vi. 1913 (*Carr*). Nottingham district (*Ryles*). Cotgrave, 27. vi. 1912; Nuthall, 25. vi. 1914 (*Robinson*). Besthorpe, 13. vi. 1914 (*Thornley*).
- M. fibulatus** Kies. Sherwood Forest (*Fowler, Brit. Coleop.*, iv. 152).

MALACHIUS Fab.

- M. bipustulatus** L. Sherwood Forest (*Taylor*). Worksop (*Houghton*). North and South Leverton; Treswell Wood; Gringley Wood, abundant; Besthorpe, 13. vi. 1914 (*Thornley*). North Wheatley (*Chamberlin*). Markham Clinton (*Miss M. C. Atkinson*). Nottingham district (*Ryles, Dodd, etc.*). Holme Pierrepont, 18. vi. 1914 (*Robinson*). Aspley Woods, 18. v. 1912; Radcliffe-on-Trent, 29. v. and 10. vii. 1912; Crow Wood Hill, West Leake, 19. v. 1914.

DASYTES Payk.

- D. flavipes** Fab. South Leverton (*Thornley*). Gamston near Retford (*Chamberlin*). Nottingham district (*Ryles*). Gam-

ston near Nottingham, 15. vi. 1911; Cotgrave, 1. vii. 1909 and 27. vi. 1912; Holme Pierrepont, 18. vi. 1914 (*Robinson*). East Leake, 19. vi. 1912.

D. aerosus Kies. Sherwood Forest (*Bedwell, Taylor*). Nottingham (*Ryles*).

D. oculatus Kies. Sherwood Forest, by beating oaks, July and August 1870, *J. Ray Hardy* (*Rye, E.M.M.*, Feb. 1871, pp. 205—7; also *Fowler, Brit. Coleop.*, iv. 161).

HAPLOCNEMUS Steph.

H. impressus Marsh. Sherwood Forest, June 1906, beaten out of old oaks (*J. K. Taylor and G. W. Chaster, E.M.M.*, Dec. 1906, p. 272).

PHLOEOPHILUS Steph.

P. edwardsi Steph. Sherwood Forest, taken by Rev. A. Matthews in some numbers by beating the old dead boughs of standing trees in October (*Fowler, Brit. Coleop.*, iv. 165).

CLERIDAE.

OPILO Latr.

O. mollis L. Nottinghamshire (*Wm. Howitt, Book of the Seasons*). Nottingham, one specimen in a garden in the Park (*Ryles*).

THANASIMUS Latr.

T. formicarius L. Sherwood Forest (*Bedwell, Tomlin*). In same locality, July 1908, with *Agrilus biguttatus*, occurring in bark of oak with the *Agrilus*, and flying and settling on the trunk of the tree. 'This looks as if they were parasitic on the *Agrilus*' (*H. Donisthorpe in Entom. Record*, Oct. 1908, p. 237).

NECROBIA Latr.

N. ruficollis Fab. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*). Retford, common in bone mill (*Pegler*). Nottingham, in profusion in bone mill (*Ryles*).

N. violacea L. Sherwood Forest, several in a dead rook scare-crow, June 1903 (*Taylor*). Kingston-upon-Soar, in old bones, Aug. 1911 (*Thornley*).

N. rufipes De G. Sherwood Forest, in carrion, Oct. 1886 (*Blatch and Horner*). Retford, common in bone mill with *N. ruficollis* (*Pegler*). Nottingham, in profusion in bone mill (*Ryles*).

CORYNETES Herbst.

C. coeruleus De G. South Leverton, was very common in the old church with *Xestobium* (*Thornley*). Retford (*Pegler*). North Wheatley (*Chamberlin*).

LYMEXYLONIDAE.

HYLECOETUS Latr.

H. dermestoides L. Sherwood Forest (*Shuckard* in *Ent. Mag.*, July 1836). Sherwood Forest, locally common (*Fowler, Brit. Coleop.*, iv. 177); also taken in same locality by Messrs. Bedwell, Chaster, Taylor and Tomlin.

PTINIDAE.

PTINUS L.

P. sexpunctatus Panz. Nottingham University College, Nov. 9, 1897: many examples bred from specimens of *Draba* sp. in the herbarium, which had been brought the previous year from Franz Josef Land by Mr. H. Fisher. The origin of the insect is quite uncertain and may have been local.

P. fur L. Retford district (*Thornley and Pegler*). Nottingham, frequent; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).

P. subpilosus Müll. Sherwood Forest, beaten out of faggots, June 1907 (*Donisthorpe*).

P. tectus Boield. A colony of this introduced beetle was found in a chemist's shop at Carrington, Nottingham, in December 1914, breeding in and thriving upon Cayenne pepper! (*Thornley, teste J. J. Walker*; see *E.M.M.*, January 1915, p. 18).

NIPTUS Boield.

N. hololeucus Fall. Worksop (*Houghton*). Retford district, in houses and old flour mill (*Pegler*). North Wheatley (*Chamberlin*). Bulwell (*Dodd*). Nottingham, rather common in houses, etc. (*Carr*). Kingston-upon-Soar (*Thornley*).

N. crenatus Fab. Nottingham (*Ryles*).

HEDOBIA Sturm.

H. imperialis L. Sherwood Forest (*Bedwell*). South Leverton, at hawthorn blossom, etc., some years common (*Thornley*). North Wheatley, one specimen in rectory garden (*Chamberlin*). Nottingham; Wollaton (*Ryles*). Watnall, 28. v. 1914 (*Robinson*).

ANOBIIDAE.

DRYOPHILUS Chev.

D. pusillus Gyll. Sherwood Forest, in numbers, 1899 (*Ryles*).

D. anobioides Chev. Sherwood Forest, one example, 1899 (*Ryles, teste Thornley*).

PRIOBIUM Mots.

P. castaneum Fab. Sherwood Forest (*Bedwell, Taylor, Tomlin*). Retford district, not uncommon (*Thornley and Pegler*). Markham Clinton, June 1907 (*Miss M. C. Atkinson*). Upton near Southwell, 30. vi. 1913 (*Carr*). Nottingham district (*Ryles*).

ANOBIUM Fab.

A. domesticum Fourc. Retford district, common (*Thornley and Pegler*). North Wheatley (*Chamberlin*). Bulwell (*Dodd*). Holme Pierrepont, 18. vi. 1914 (*Robinson*). Nottingham district, frequent; Upton near Southwell, 30. vi. 1913.

A. fulvicorne Sturm. Sherwood Forest, two specimens beaten out of dead thorn, Aug. 1904, and two beaten from old oak, June 1905 (*Taylor*). South Leverton (*Thornley*). Beeston (*Ryles*).

A. paniceum L. Sherwood Forest, one example, June 1907: 'introduced with pheasants' food' (*Donisthorpe*). North Leverton, 11. iii. 1901; South Leverton, in vicarage, 17. v. 1899, etc. (*Thornley*). Retford, in old corn mill (*Pegler*).

XESTOBIUM Mots.

X. tessellatum Fab. Retford; South Leverton, common in the old church, 1892—98 (*Thornley*). Colwick near Nottingham (*Ryles*).

ERNOBIUS Thoms.

- E. mollis** L. Workshop (*Houghton*). Upton near Southwell, 30. vi. 1913 (*Carr*). Nottingham (*W. H. Freestone*). Arnold, 27. vii. 1911 (*Robinson*).

PTILINUS Geoffr.

- P. pectinicornis** L. Sherwood Forest, June 1906, abundant under beech bark, boring into the solid wood, females only seen (*Taylor and Chaster, E.M.M., Dec. 1906, p. 272*). South Leverton, occasionally, but on 27. vi. 1901 the females were in abundance, boring holes in walls of my oil shed (*Thornley*). Nottingham, common; Upton near Southwell, 12. vii. 1913.

OCHINA Steph.

- O. hederæ** Müll. Retford (*Pegler*). Chilwell (*Ryles*).

XYLETINUS Latr.

- X. ater** Panz. On old palings at Newark, *Hadfield* (*Fowler, Brit. Coleop., iv. 195*).

DORCATOMA Thoms.

- D. chrysomelina** Sturm. Sherwood Forest, in old fallen oak, June 1906 (*Taylor and Chaster*).

- D. flavicornis** Fab. Sherwood Forest (*A. Matthews, Taylor*).

ANITYS Thoms.

- A. rubens** Hoff. Sherwood Forest, a large number of dead specimens taken in an old tree by Rev. A. Matthews (*Fowler, Brit. Coleop., iv. 198*); taken in same locality by Messrs. Chaster, Taylor and Tomlin. Sherwood Forest, a few examples and several larvae in a very rotten damp knot of an old fallen oak, June 1906: some of the larvae were subsequently reared (*Chaster and Taylor*).

BOSTRICHIDAE.

BOSTRICHUS

- B. capucinus** L. 'Notts., *Stephens*' (*Fowler, Brit. Coleop., iv. 201*).

RHIZOPERTHA Steph.

R. pusilla Fab. Retford, in old corn-mill (*Pegler*).

LYCTIDAE.

LYCTUS Fab.

L. canaliculatus Fab. 'Very abundant during the summer in Notts., *Dr. Howitt*' (*Stephens*). Worksop (*Houghton, teste Thornley*).

L. brunneus Steph. 'Nottingham, one specimen in a shop window, 1829, *Dr. Howitt*' (*Stephens*).

SPHINDIDAE.

SPHINDUS Chev.

S. dubius Gyll. Sherwood Forest, June 1870 (*Taylor*); June 1889 (*Blatch*).

CISSIDAE.

CIS Latr.

C. boleti Scop. Sherwood Forest (*Taylor, Tomlin*). Wellow Park, common, 20. ix. 1911 (*Thornley and Carr*). Retford district (*Thornley and Pegler*). Nottingham district (*Ryles*). Newark; West Leake, 17. viii. 1904; Kingston-upon-Soar, Oct. 1910 (*Thornley*).

C. micans Herbst. Sherwood Forest (*Chaster, Fowler, Tomlin*).

C. hispidus Payk. Sherwood Forest, in fungi on old trees, etc., Oct. 1886 (*Blatch and Horner*); in same locality (*Chaster*); also 11. vii. 1908 (*Donisthorpe*).

C. bidentatus Ol. Sherwood Forest, in fungi on stumps, Oct. 1886 (*Blatch and Horner*). Retford (*Pegler*).

C. nitidus Herbst. Sherwood Forest, in fungi on old trees and stumps, Oct. 1886 (*Blatch and Horner*).

C. pygmaeus Marsh. Sherwood Forest, in *Boletus* on birch, June 1904 (*Taylor*).

C. festivus Panz. Sherwood Forest, in fungi on old trees and stumps, Oct. 1886 (*Blatch and Horner*); in same locality, June 1905 (*Taylor*).

- C. fuscatus** Mell. Sherwood Forest, in fungi on old trees and stumps, Oct. 1886 (*Blatch* and *Horner*); also taken in same locality by J. K. Taylor.

ENNEARTHRON Mell.

- E. cornutum** Gyll. Sherwood Forest, two specimens in fungus on tree, June 1903 (*Taylor*); taken in same locality by Messrs. Chaster and Tomlin.

OCTOTEMNUS Mell.

- O. glabriculus** Gyll. Sherwood Forest (*Taylor*, *Tomlin*). Willow Park, 20. ix. 1911 (*Thornley* and *Carr*). Retford district (*Thornley* and *Pegler*). Nottingham district (*Ryles*). Clifton Grove, 10. x. 1909.

CERAMBYCIDAE.

AROMIA Serv.

- A. moschata** L. Retford district (*Pegler*). North Wheatley (*Chamberlin*). Rampton (*Thornley*). Nottingham, osier bed near Trent Bridge, July 1898, twelve specimens (*Ryles*). Clifton Grove (*Carr*, *Ryles*). West Bridgford (*E. Hillman*).

ASEMUM Esch.

- A. striatum** L. One specimen on doorstep of house in Retford, 16. vi. 1909; possibly brought from Scotland in fir logs (*Pegler*).

CALLIDIUM Fab.

- C. violaceum** L. Worksop, 5. vi. 1904 (*Houghton*). Ruddington (*Freestone* and *Ryles*).
- C. variabile** L. Sherwood Forest, taken many years ago by Messrs. J. K. Taylor, W. G. Blatch, and Joseph Chappell, and more recently by Mr. J. R. le B. Tomlin; Messrs. J. K. Taylor and G. W. Chaster also took it abundantly under bark of fallen oak branches in June 1906.

CLYTUS Laich.

- C. arcuatus** L. Nottingham, 13. vii. 1914 (*Saunt*).
- C. arietis** L. Sherwood Forest, frequent (*Carr* and others). Worksop (*W. H. Glossop*). Retford district; North and

South Leverton, common; Clifton Grove; Kingston-upon-Soar; Besthorpe, 13. vi. 1914 (*Thornley*). North Wheatley, fairly common (*Chamberlin*). Southwell; Nottingham; Bingham; Bunny New Wood; East Leake, common on flowers of *Anthriscus sylvestris*, 19. v. 1912, etc.; West Leake, 14. vi. 1913, etc. (*Carr*). Edwalton; Owthorpe; Stapleford; Trowell (*Saunt*).

C. mysticus L. Retford district (*Pegler*). South Leverton, some years not uncommon (*Thornley*). Chilwell (*Ryles*). Bingham, 1912 (*R. Pilling*). Trowell, 1913 (*J. Dawson*).

GRACILIA Serv.

G. minuta Fab. Retford, in great quantity in an old hamper (*Pegler*). Kingston-upon-Soar, one specimen, Aug. 1903 (*Thornley*).

MOLORCHUS Fab.

M. minor L. Epperstone Park, one example, 5. vi. 1911 (*Saunt*).

RHAGIUM Fab.

R. inquisitor Fab. Epperstone Park, 20. v. 1901 (*Carr*), and 19. v. 1912 (*Saunt*). Kingston-upon-Soar (*Thornley*).

R. bifasciatum Fab. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*). Manor Hills, Worksop, in rotten stump, 12. xi. 1910 (*Carr*). Retford district (*Pegler*).

TOXOTUS Ser.

T. meridianus L. Wellow Park (*Becher*). Worksop (*Hodding*). Retford district (*Pegler*). Clarbrough (*Chamberlin*). South Leverton; Treswell Wood; East Park Wood, Laxton, 15. vi. 1906; Besthorpe, 13. vi. 1914 (*Thornley*). Stapleford (*Dawson*). Wollaton (*Ryles*). Owthorpe, 6. vi. 1914 (*Saunt*). Southwell, 15. vi. 1899; Crow Wood Hill, West Leake, 23. vi. 1912 and 14. vi. 1913.

LEPTURA L.

L. scutellata Fab. Sherwood Forest, June 1869 (*J. K. Taylor*).

L. livida Fab. Cottam, one example, 6. vii. 1901 (*Eland Shaw*).

STRANGALIA Ser.

S. quadrifasciata L. Sherwood Forest, in a rotten birch, June 1868 (*J. K. Taylor*); taken in same locality by E. C.

Bedwell. Langford Moor near Newark, Aug. 1897 (*Carr*), and 25. vii. 1912 (*Saunt*).

S. armata Herbst. Sherwood Forest, frequent (*Carr* and others). Wellow Park (*Becher*). Retford district (*Pegler*). Treswell Wood, sometimes quite common on Umbelliferae (*Thornley*). Warsop, on flowers of *Chrysanthemum leucanthemum*, 14. vii. 1913; Beauvale Woods, common on *Spiraea ulmaria* flowers, 12. vii. 1912; Aldercar Wood, Newstead, 29. vii. 1914 (*Carr*). Epperstone Park (*Saunt*).

GRAMMOPTERA Ser.

G. tabacicolor De G. Sherwood Forest (*Bedwell*, *Ryles*, *Taylor*). Treswell and Gringley Woods near Retford (*Thornley*).

G. analis Panz. Colwick (*Ryles*).

G. ruficornis Fab. Sherwood Forest (*Bedwell*, *Carr*, *Taylor*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Treswell Wood, 29. v. 1899; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles*). Aspley Woods near Nottingham, very common on *Heracleum* flowers, June and July 1912; Crow Wood Hill, West Leake, 27. v. and 2. vi. 1913; East Leake, 19. v. 1912 (*Carr*). Radcliffe-on-Trent, 27. v. 1912 (*Robinson*).

LAMIIDAE.

ACANTHOCINUS Steph.

A. aedilis L. Worksop (*Houghton*). Nottingham, rather frequent; Wilford, 26. viii. 1893; Cossall. Not infrequent in the county: possibly introduced in pit-props.

LEIOPUS Ser.

L. nebulosus L. Sherwood Forest, in abundance by beating old oaks in June (*Taylor*); also taken in same locality by Messrs. Bedwell, A. R. Jackson, Ryles and Tomlin. Clumber (*Pegler*). South Leverton, 30. vi. 1899 (*Thornley*). Bramcote (*Ryles*). Aspley Woods near Nottingham, 4. vii. 1912.

POGONochaerus Latr.

P. bidentatus Thoms. South Leverton, not uncommon in late autumn (*Thornley*).

- P. dentatus** Fourc. Sherwood Forest, beaten from dead holly branches, June 1903 (*Taylor*); taken also in the Forest by Bedwell. South Leverton (*Thornley*).

MONOHAMMUS Latr.

- M. sartor** Fab. Timber yard, London Road, Nottingham, 1909 and 1914 (*Saunt*). Introduced in timber.
- M. sutor** L. Clifton Colliery, Nottingham, introduced with timber.

AGAPANTHIA Ser.

- A. lineatocollis** Don. Sherwood Forest near Edwinstowe, June 1912.

SAPERDA Fab.

- S. carcharias** L. Worksop (*Houghton*). Cinder-hill near Nottingham.
- S. scalaris** L. Sherwood Forest, taken commonly by many collectors.
- S. populnea** L. East Park Wood, Laxton, 15. vi. 1906 (*Chamberlin*).

TETROPS Steph.

- T. praeusta** L. South Leverton, not uncommon; North Leverton, 4. vi. 1901; Treswell Wood, 4. vi. 1900 (*Thornley*).

STENOSTOLA Muls.

- S. ferrea** Schr. Taken at Nottingham abundantly in June 1828, and sparingly in 1829; *Dr. Godfrey Howitt (Entom.* 1878, p. 177). Near Nottingham, 1831 (*A. H. Davis, London's Mag. N.H.*, April 1832). Newark (*Fowler, Brit. Coleop.*, iv. 254). Sherwood Forest (*H. Willoughby Ellis*).

PHYTOECIA Muls.

- P. cylindrica** L. Newark, *Hadfield (Fowler, Brit. Coleop.*, iv. 255).

BRUCHIDAE.

BRUCHUS L.

- B. pisi** L. Nottingham, etc.

B. rufimanus Boh. Nottingham (*Rylex*). South Leverton, 28. v. 1900 (*Thornley*).

B. villosus Fab. Sherwood Forest (*Toulmin*).

CHRYSOMELIDAE.

DONACIA Fab.

D. simplex Fab. Nottingham (*Rylex*). Newark, May 1909 (*Thornley*). Epperstone, 1912 (*Saunt*).

D. semicuprea Panz. Worksop (*Houghton*). Canal, Retford, common (*Thornley*). Canal, Wollaton (*Rylex*).

D. sericea L. Worksop (*Houghton*). Clumber (*Pegler*). Canal, Retford, common; canal near Kimberley (*Thornley*). Stapleford (*Dawson*). Canal, Wollaton (*Rylex*).

HAEMONIA Curt.

H. appendiculata Panz. Holme Pierrepont (*Freestone, textu Thornley*).

ZEUGOPHORA Kunz.

Z. subspinosa Fab. Treswell Wood (*Thornley*).

LEMA Fab.

L. cyanella L. Wynnstay Wood, Clipston, 12. viii. 1914 (*Morley*).

L. lichenis Voet. Retford district (*Pegler*). Treswell Wood, 29. v. 1899; Kingaton-upon-Soar, 1912 (*Thornley*). Nottingham district (*Rylex*). Oxton Bogs, 24. iv. 1913.

L. melanopa L. Treswell Wood, 27. vi. 1898 (*Thornley*). Trent-bank, Rampton (*Chamberlin*). Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).

CRIOCERIS Geof.

C. asparagi L. On asparagus, Sutton Bonington; common on asparagus in Kingaton Hall gardens, Aug. 1912 (*Thornley*).

CRYPTOCEPHALUS Geof.

C. coryli L. Langford Moor near Newark, a single specimen beaten from birch, 29. vi. 1899 (*Thornley*). Sherwood

Forest, two ♂♂ and six ♀♀ by beating birches and oaks in June 1903 (*Taylor, F.M.M.*, Feb. 1904, p. 32). Taken again in 1904 by Messrs. Taylor and Hardy; also fifteen specimens, of both sexes, on young birches in June 1905 by Mr. Taylor; and again, ♀♀ only, in June 1906. Sherwood Forest, in some numbers by beating birches, June 21—25, 1907 (*Donisthorpe*); taken also in same locality by E. C. Bedwell.

C. fulvus Goeze. Barrow Hills, Everton, on birch, July 1905 (*Chamberlin*).

C. pusillus Fab. Sherwood Forest (*Fowler, Brit. Coleop.*, iv. 295).

C. labiatus L. Sherwood Forest, in numbers (*Ryles*); near Edwinstowe, 10. viii. 1914 (*Carr*); taken also in the Forest by Messrs. Bedwell, Randell Jackson, and Taylor. Barrow Hills, Everton, on birch, July 1905 (*Chamberlin*). Langford Moor, on birch, 29. vi. 1899 (*Thornley*).

C. querceti Suffr. Sherwood Forest. First taken by Rev. A. Matthews and recorded by G. R. Crotch in *Cat. Brit. Coleop.*, ed. 2; then by J. K. Taylor, by beating oaks, in 1869 and 1870; subsequently taken—also by beating oaks—by Messrs. Matthews and Blatch, Ryles, Chaster and Taylor, Bedwell, and Donisthorpe; and near Edwinstowe, July 1, 1911, by J. W. Carr.

TIMARCHA Latr.

T. tenebricosa Fab. South Leverton, common some years; Cottam, in profusion in September; Stokeham (*Thornley*). North Wheatley (*Chamberlin*). Rampton and Laneham, 16—19. iv. 1899.

T. violaceonigra De G. Retford (*Pegler*). Bulwell (*Ryles*).

CHRYSOMELA L.

C. staphylea L. Retford district, common (*Thornley* and *Pegler*). South Leverton; Barrow Hills, Everton (*Chamberlin*). Nottingham district (*Ryles* and *Dodd*). Tollerton, 18. iv. 1914 (*Robinson*). Park Drain, Misson, 22. ix. 1914.

C. polita L. Worksop (*Houghton*). Retford (*Pegler*). South Leverton; Besthorpe, 13. vi. 1914; Kingston-upon-Soar; West Leake Hills, 25. viii. 1904 and 29. viii. 1912 (*Thornley*). Rampton (*Chamberlin*). Alverton, 11. v. 1907; Park Wood, Caunton, 9. vi. 1908; Creswell Crags, 22. ix. 1913; Aspley Woods, 9. vii. 1912; Radcliffe-on-Trent, 10. vii. 1912; Park

Drain, Misson, 22. ix. 1914 (*Carr*). Nottingham (*Ryles*).
Cotgrave; Radcliffe (*Robinson*).

C. orichalcia Müll. South Leverton, a few in very late
autumn; Barton-in-Fabis, 12. vi. 1914 (*Thornley*).

var. *hobsoni* Steph. Nottingham, one example (*B. S. Dodd*).

C. goettingensis L. Sherwood Forest, one example in April
1893 (*W. W. Fowler*). In churchyard, Sutton-in-Ashfield,
21. v. 1908 (*fide Thornley*).

C. fastuosa Scop. Ruddington (*Ryles*). Lenton (*Saunt*).
Nottingham, 3. vi. 1913 (*Robinson*).

C. didymata Scrib. Barrow Hills, Everton, 11. vii. 1903
(*Thornley*). Worksop, 1904, bred by Lady Robinson.

C. hyperici Forst. Sherwood Forest, 1899 (*Ryles*). South
Leverton (*Thornley*). Barrow Hills, Everton, July 1905
(*Chamberlin*). Cuckney Hay Wood, Nether Langwith, 11.
viii. 1914.

MELASOMA Steph.

M. populi L. Gamston near Retford, 1905 (*Chamberlin*).

PHYTODECTA Kirb.

P. rufipes De G. Basford (*G. Henderson*).

P. olivacea Forst. Barrow Hills, Everton, on broom, 8. viii.
1904 (*Chamberlin*).

GASTROIDEA Hope.

G. viridula De G. Cottam, sometimes abundant on dock
(*Thornley*). Rampton (*Chamberlin*). Nottingham and
surrounding district common; East Bridgford and Radcliffe,
by the Trent (*Carr*). Trent-side, Thrumpton (*Thornley*).
Stoke Bardolph (*Robinson*). Ratcliffe-upon-Soar (*Saunt*).

G. polygoni L. Sherwood Forest (*Taylor*). Worksop (*Hough-*
ton). Retford district, common (*Thornley* and *Pegler*).
Nottingham district, common; Aspley Woods; Crow Wood
Hill, West Leake; Clifton (*Carr*). Bingham (*R. Pilling*).
Hucknall Torkard; Radcliffe-on-Trent (*Robinson*). Kings-
ton-upon-Soar (*Thornley*). Stapleford (*Dawson*). Owthorpe
(*Saunt*).

PHAEDON Latr.

P. tumidulus Germ. Sherwood Forest (*Taylor*). North and
South Leverton; Rampton Marsh; Kingston-upon-Soar,

29. vii. 1912 (*Thornley*). Laneham, on *Anthriscus*, 19. iv. 1899; Bingham, 11. vi. 1907; Chilwell, 12. v. 1907; West Leake Hills, 19. v. 1914 (*Carr*). Papplewick, 5. vi. 1913; Cotgrave; Linby, 28. iv. 1914 (*Robinson*).

P. cochleariae Fab. South Leverton, common in vicarage garden on horse-radish (*Thornley*). South Wheatley; Rampton (*Chamberlin*). Stapleford (*Dawson*). Bingham, 11. vi. 1907; Fiskerton, on watercress, 25. vii. 1913.

PHYLLODECTA Kirb.

P. vulgatissima L. Clumber (*Pegler*). Littleborough (*Thornley*). Nottingham (*Ryles*). North Collingham, 25. viii. 1913.

P. cavifrons Thoms. North Collingham, 25. viii. 1913.

P. vitellinae L. Sherwood Forest (*Taylor*). Retford (*Pegler*). Gamston near Retford (*Chamberlin*). Rampton; East Park Wood, Laxton, 15. vi. 1906; Langford Moor, 29. vi. 1899 (*Thornley*), and 14. viii. 1914, abundant (*Carr*). Markham Clinton (*Miss M. C. Atkinson*). Warsop, 14. vii. 1913; Nether Langwith, 19. viii. 1912; North Collingham, 25. viii. 1913; Aldercar Wood, Newstead, 29. vii. 1914 (*Carr*). Nottingham (*Ryles*, *Saunt*). Stapleford, 13. viii. 1914 (*Robinson*).

HYDROTHASSA Thoms.

H. aucta Fab. Treswell Wood, 14. vii. 1899 (*Thornley*). Cottam (*Chamberlin*).

H. marginella L. Sherwood Forest (*Taylor*). Retford district (*Pegler*). Trent-bank, Laneham, 19. iii. 1906 (*Chamberlin*). Nottingham district (*Ryles*). Nottingham, by the Trent, 2. v. 1913; Radcliffe-on-Trent, 25. v. 1912.

PRASOCURIS Latr.

P. junci Brahm. Sherwood Forest (*Taylor*). Catchwater Drain, South Leverton (*Thornley*).

P. phellandrii L. Catchwater Drain, South Leverton; River Trent, Kelham near Newark, 13. v. 1909 (*Thornley*). Nottingham district (*Ryles*).

PHYLLOBROTICA Redt.

P. quadrimaculata L. Retford (*Pegler*).

LUPERUS Geof.

L. rufipes Scop. Sherwood Forest (*Ryles*). Barrow Hills near Everton (*Chamberlin*).

L. flavipes L. Sherwood Forest (*Bedwell, Pegler, Taylor*). Clumber (*Pegler*). Edwinstowe, 1. vii. 1911 (*Carr*). Barrow Hills, Everton (*Chamberlin*). South Leverton (*Thornley*). Nottingham (*Saunt*).

LOCHMAEA Weise.

L. capreae L. Sherwood Forest, June 1912 (*Dr. A. Randell Jackson*). Langford Moor near Newark, 14. viii. 1914.

L. suturalis Thoms. Sherwood Forest (*Taylor*); in same locality near Edwinstowe, taken commonly by beating *Calluna*, 25. ix. 1913 (*Carr*). Worksop (*Houghton*). Retford district (*Pegler*). Langford Moor, 14. viii. 1914.

L. crataegi Forst. Sherwood Forest, abundant on hawthorn blossom in June (*Taylor*); taken also by E. C. Bedwell. Clumber (*Pegler*). Boughton Breck near Ollerton (*Chamberlin*).

GALERUCELLA Crotch.

G. nymphaeae L. The Delph, South Leverton (*Thornley*).

G. lineola Fab. Rampton, common amongst osiers on Trent-bank, 18. vii. 1899; Cottam; South Leverton (*Thornley*). Glapton near Clifton, 15. v. 1915.

G. tenella L. Thorney, two specimens, 15—19. viii. 1913 (*L. A. Carr*).

ADIMONIA Laich.

A. tanaceti L. Barrow Hills, Everton, in profusion on *Centaurea scabiosa* in sand pit, 13. ix. 1902 (*Thornley*).

SERMYLA Chap.

S. halensis L. Budby, Sherwood Forest, July 1899 (*J. Golding*). Sherwood Forest (*Taylor*). Near Edwinstowe, Sherwood Forest, taken commonly by sweeping grass and heather, 25. ix. 1913 and 10. viii. 1914 (*Carr*). Retford district (*Pegler*). North Wheatley; Elkesley; common at Barrow Hills, Everton (*Chamberlin*). Gotham Hills, 28. viii. 1906 (*Thornley and Carr*). Langford Moor, 16. viii. 1912, etc.; East Leake, 4. viii. 1914; Nether Langwith, 11. viii. 1914.

LONGITARSUS Latr.

- L. anchusae** Payk. Clumber (*Pegler*). Upton near Southwell, 30. vi. 1913.
- L. luridus** Scop. South Leverton, common (*Thornley*). Plumtree, 4. viii. 1914 (*Robinson*). Bingham, 11. vi. 1907; Crow Wood Hill, West Leake, 8. ix. 1914.
- L. suturellus** Duft. Sherwood Forest, by sweeping, June 1905 (*Taylor*). South Leverton; Treswell Wood (*Thornley*). Nottingham (*Ryles*). Widmerpool, 18. viii. 1913 (*Carr, teste J. J. Walker*).
- var *fuscicollis* Steph. Retford district (*Pegler*). South Leverton and Treswell Wood, common (*Thornley*). Epperstone Park, 6. ix. 1913 (*Thornley and Carr*). Papplewick, 28. iv. 1914; Plumtree, 4. viii. 1914 (*Robinson*).
- L. atricillus** L. Sherwood Forest, by sweeping, Oct. 1905 (*Taylor*). Retford district (*Pegler*). South Leverton; Treswell Wood; Crow Wood Hill, West Leake, 11. ix. 1913 (*Thornley*). Nottingham (*Saunt*). Epperstone Park, 6. ix. 1913; Clipston Wolds, 12. viii. 1914 (*Carr*). Bulcote Wood, 17. x; Cotgrave, 23. x.—1913; Clifton, 21. iv; Arnold, 14. v.; Beeston, 13. viii.; Plumtree, 4. viii.—1914 (*Robinson*).
- L. melanocephalus** De G. Retford district (*Pegler*). South Leverton and Treswell Wood, common (*Thornley*). Nottingham district (*Ryles, Saunt*). Crow Wood Hill, West Leake, 10. iv. 1915; Roe Wood, Winkburn, 13. iv. 1915.
- L. piciceps** Steph. Sherwood Forest, one specimen by sweeping, June 1903 (*E. C. Bedwell*): determination confirmed by Mr. Newbery. Widmerpool, 18. viii. 1913 (*Carr, teste J. J. Walker*).
- L. femoralis** Marsh. Sherwood Forest, on *Cynoglossum* in Thoresby Park, June 1906 (*Taylor*). Thrumpton, in flowers of *Cynoglossum officinale*, 18. vi. 1910 (*Thornley*).
- L. pusillus** Gyll. Sherwood Forest, by sweeping low herbage, June 1903 (*Taylor*); in same locality (*Bedwell*). Kingston-upon-Soar, in abundance on ragwort, Aug. 1911 (*Thornley*). Plumtree, 4. viii. 1914 (*Robinson*).
- L. jacobaeae** Wat. Sherwood Forest (*Taylor*). Sutton near Retford (*Pegler*). Gotham Hills, 28. viii. 1906; Kingston-upon-Soar, Aug. 1911 (*Thornley*).
- L. ochroleucus** Marsh. North Collingham, 25. viii. 1913.

L. gracilis Kuts. Kingston-upon-Soar, common on *Senecio jacobaea* on the hills, Aug. 1901 (*Thornley* and *Carr*). Widmerpool, several, 18. viii. 1913.

var. *poweri* All. Sherwood Forest, on ragwort, May 1904 (*Taylor*).

L. laevis Duft. Sherwood Forest, by sweeping ragwort, Aug. 1903 (*Taylor*). South Leverton, common (*Thornley*). Nottingham and Arnold, July 1914 (*Robinson*). East Leake, 4. viii. 1914.

HALTICA Geoff.

H. pusilla Duft. Sherwood Forest near Edwinstowe, 10. viii. 1914.

PHYLLOTRETA Foud.

P. nodicornis Marsh. Nottingham and Radcliffe-on-Trent, 1899 (*Ryles*).

P. vittula Redt. Sherwood Forest, two specimens by sweeping low plants, June 1903 (*Taylor*). Treswell Wood, 6. v. 1899 (*Thornley*).

P. undulata Kuts. Sherwood Forest, June 1905 (*Taylor*). Clumber (*Pegler*). Mansfield, 27. v. 1912 (*Saunt*). Nottingham; Burton Joyce (*Ryles*). Radcliffe-on-Trent; Car Colston, 11. iv. 1912; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley* and *Carr*). Strelley, 10. ix. 1914 (*Robinson*). North Collingham, 25. viii. 1913.

P. nemorum L. North Notts., common (*Chamberlin*). Work-sop (*Houghton*). Retford district, common (*Thornley* and *Pegler*). Nottingham district, common.

P. tetrastigma Com. Clumber (*Pegler*).

P. exclamationis Thunb. Nottingham; Beeston (*Ryles*).

APHTHONA Chev.

A. atrocoerulea Steph. South Leverton, common in an out-house in late autumn (*Thornley*). Widmerpool, 18. viii. 1913.

BATOPHILA Foud.

B. rubi Payk. Retford (*Pegler*). Leverton, common on *Rubus* (*Thornley*). Radcliffe-on-Trent (*Ryles*).

SPHAERODERMA Steph.

S. testacea Fab. Nottingham (*Ryles*).

S. cardui Gyll. Barrow Hills, Everton (*Chamberlin*). Cottam, 6. vii. 1901 (*E. Shaw*). South Leverton; Rampton Marsh, 18. vii. 1899; Kingston-upon-Soar, 24. vii. 1912 (*Thornley*). Nottingham (*Ryles*).

APTEROPEDA Redt.

A. orbiculata Marsh. Sherwood Forest (*Taylor, Tomlin*). Clumber (*Pegler*). Treswell Wood, 29. v. 1899 (*Thornley*). Aspley, Nottingham (*Ryles*).

MANTURA Steph.

M. rustica L. Sherwood Forest (*Ryles, Taylor*). South Leverton (*Thornley*). Nottingham district (*Ryles*). Glapton near Clifton, 13. iii. 1912; Crow Wood Hill, West Leake, 19. v. 1914 (*Carr*). Clifton, 21. iv. 1914 (*Robinson*).

CREPIDODERA Chev.

C. transversa Marsh. Budby, Sherwood Forest (*J. Golding*). Grove; Crow Park; Broadholme (*Pegler*). South Leverton; Kingston-upon-Soar; Gotham (*Thornley*). Upton near Southwell, 30. vi. 1913; Kirkby-in-Ashfield, 19. vii. 1913 (*Carr*). Nottingham district (*Ryles*). East Leake, 5. vii. 1911 (*Robinson*).

C. ferruginea Scop. Worksop (*Houghton*). Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Kingston-upon-Soar, 29. vii. 1912, etc.; Thrumpton, 12. viii. 1912; West Leake 14. vi. 1913; Park Drain, Misson, 22. ix. 1914 (*Thornley*). Nottingham district, common; Quarry Banks, Linby, 20. vii. 1914; Upton near Southwell, 30. vi. 1913; Thorney.

C. rufipes L. Sherwood Forest; Nottingham (*Ryles*). Treswell Wood, 27. vi. 1899; Welham near Retford (*Thornley*).

C. nitidula L. Epperstone Park, on aspens, 6. ix. 1913.

C. aurata Marsh. Worksop (*Houghton*). Retford district, common (*Thornley and Pegler*). Treswell; North Leverton; Rampton (*Thornley*). North Wheatley (*Chamberlin*). Nottingham district (*Ryles*). Nuthall, 24. v. 1915 (*Robinson*). Stapleford; Cotgrave (*Dawson*). Upton near Southwell, 30. vi.; Fiskerton, 25. vii.; North Collingham, 25. viii.; near Newbound Mill, Teversall, 26. vi.—1913; Finningley and Misson, 22. ix. 1914.

- C. smaragdina** Foud. Finningley near Bawtry, by sweeping fine grasses, 22. ix. 1914.

CHAETOCNEMA Steph.

- C. hortensis** Fourc. Sherwood Forest (*Taylor*). South Leverton, 17. x. 1897 (*Thornley*). Nottingham (*Ryles*).

PLECTROSCELIS Redt.

- P. concinna** Marsh. Sherwood Forest (*Taylor*). Retford district, common (*Thornley*). Gamston near Retford (*Chamberlin*). Nottingham district (*Ryles, Dodd*). Epperstone Park, 6. ix. 1913 (*Thornley and Carr*). Radcliffe-on-Trent, 1. v. 1913 and 1. iv. 1914; Nuthall, 15. iv.; Gamston near Nottingham, 28. iv.—1915; Clifton, 21. iv. 1914; Strelley, 10. ix. 1914 (*Robinson*). Kingston-upon-Soar (*Thornley*). Langford Moor, 14. viii. 1914 (*Morley and Carr*). Crow Wood Hill, West Leake, 8. ix. 1914; Finningley, 22. ix. 1914; Thurgarton, 8. v. 1915.

PSYLLIODES Latr.

- P. napi** Koch. Radcliffe-on-Trent (*Ryles*). Clifton, 21. iv. 1914; Papplewick 28. iv. 1914 (*Robinson*).
- P. cuprea** Koch. Sherwood Forest (*Taylor*). Retford district, common (*Thornley and Pegler*). Gamston near Retford (*Chamberlin*). Langford Moor, 14. viii. 1914 (*Carr*). Gamston near Nottingham; Radcliffe-on-Trent (*Robinson*). Kingston-upon-Soar (*Thornley*).
- P. affinis** Payk. Tuxford (*Pegler*). Radcliffe-on-Trent (*Ryles*).
- P. luteola** Müll. Sherwood Forest, *Rev. A. Matthews* (*Fowler, Brit. Coleop.*, iv. 394).
- P. picina** Marsh. Tuxford (*Pegler*).

CASSIDA L.

- C. vittata** Vill. Clumber (*Pegler*).
- C. flaveola** Thunb. Treswell Wood, 29. v. 1899 (*Thornley*). Park Drain, Misson, 22. ix. 1914.
- C. viridis** L. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Retford district, not uncommon on *Cnicus arvensis*; South Leverton; Treswell; Treswell Wood; Cottam; Littleborough; Kingston-upon-Soar (*Thornley*).

Radcliffe-on-Trent, 1. v. 1913; Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*). Epperstone Park, 6. ix. 1913 (*Thornley and Carr*).

TENEBRIONIDAE.

BLAPS Fab.

B. mucronata Latr. Retford (*Pegler*). North Wheatley, in the church (*Chamberlin*). South Leverton, in the church (*Thornley*). Nottingham, frequent (*Ryles, Saunt, Carr, etc.*).

HELEDONA Latr.

H. agaricola Herbst. Sherwood Forest (*Taylor, E.M.M.*, Jan. 1869); in same locality in fungi on old trees, October 1886 (*Blatch and Horner*); also taken in the Forest by Messrs. Chaster, Tomlin, etc.

SCAPHIDEMA Redt.

S. metallicum Fab. Beeston; Radcliffe-on-Trent (*Ryles*). South Leverton, several under loose bark of faggots, 1. iv. 1898 (*Thornley*). Langford Moor (*Saunt*).

TENEBRIO L.

T. molitor L. Worksop (*Houghton*). North Wheatley (*Chamberlin*). Retford (*Thornley and Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district, frequent.

T. obscurus Fab. Retford (*Pegler*). Nottingham district (*Ryles*).

ALPHITOBIOUS Steph.

A. diaperinus Panz. Nottingham, 1912 (*Saunt*).

GNATHOCERUS Thunb.

G. cornutus Fab. Worksop (*Houghton*). Retford, in old flour mill (*Pegler*). Nottingham, frequent.

TRIBOLIUM McL.

T. ferrugineum Fab. Retford, in old flour mill (*Pegler*). Netherfield near Nottingham, in grain, Jan. 1907 (*F. Wakerley, teste Thornley*).

HYPOPHLOEUS Hell.

- H. castaneus** Fab. Nottingham, 30. xi. 1835, *R. Bakewell* (*Stephens, Ent. Mag.*, 1836, iii. 415). Sherwood Forest, June 1868, and in some numbers under birch bark, June 1870 (*Taylor*). Also taken in the Forest by Messrs. Blatch, Chaster, Bedwell, Tomlin, Donisthorpe, etc. Mr. Donisthorpe found it not uncommonly under bark in June 1907.
- H. linearis** Fab. Sherwood Forest, one specimen by sweeping under Scotch fir, June 1904 (*Taylor*).

HELOPS Fab.

- H. striatus** Fourc. Sherwood Forest, at sugar (*S. L. Mosley, Brit. Nat.*, June 1893); in same locality (*Jackson, Taylor, Tomlin*, etc.). Edwinstowe, Sherwood Forest, 25. ix. 1913 (*Carr*). Wellow Park, 20. ix. 1911 (*Thornley and Carr*). Barrow Hills, Everton; Gamston near Retford (*Chamberlin*). Retford; South Leverton; Sutton near Retford, at sugar (*Thornley and Pegler*). Nottingham district (*Ryles*). Bulwell (*Dodd*).

LAGRIIDAE.

LAGRIA Fab.

- L. hirta** L. Barrow Hills, Everton, 4. ix. 1903 and July 1905 (*Thornley and Chamberlin*). South Leverton; Kingston-upon-Soar; Gotham, 2. viii. 1912 (*Thornley*). Nottingham; Plumtree; Burton Joyce (*Ryles*). East Leake, 11. vii. 1914 (*Saunt*).

CISTELIDAE.

CISTELA Fab.

- C. ceramboides** L. Sherwood Forest: taken in June 1869 (*Taylor*); June 1870 (*Hardy*); also by Matthews and Sidebotham (*Fowler, Brit. Coleop.*, v. 29), and by Messrs. Bedwell and Tomlin. Two ♂♂ and two ♀♀ were taken by beating oaks in June 1905 by J. K. Taylor; two ♀♀ taken at rest on a fallen oak by Dr. Chaster, and a pair beaten from an old oak by J. K. Taylor, in June 1906 (*E.M.M.*, Dec. 1906, p. 272); also taken from an old tree in 1908 by Donisthorpe.
- C. murina** L. Grove near Retford (*Pegler*). Barrow Hills, Everton, in profusion, 15. vi. 1904 (*Thornley*).

ERYX Steph.

[*E. ater* Fab. Recorded for Sherwood Forest by Fowler, Taylor, Blatch, etc., but all these records belong to the next species.]

E. fairmairei Reiche. Sherwood Forest, 11. vii. 1908, several specimens under bark (*Donisthorpe*). First record for Britain. Previously recorded as *E. ater* by Taylor, Fowler (*Brit. Coleop.*, v. 30) and Blatch.

MYCETOCHARES Latr.

M. bipustulata Ill. Sherwood Forest, under bark of old rotten oaks, June 1905 and 1906 (*Taylor and Chaster*); also taken in same locality by Messrs. Bedwell and Tomlin.

CTENIOPUS Sol.

C. sulphureus L. Marnham, on trunk of lime tree in vicarage grounds, 19. vii. 1901; Barrow Hills, Everton, 11. vii. 1903 (*Thornley*). Taken also at the Barrow Hills, on *Echium*, in July 1905, by Rev. T. C. B. Chamberlin.

MELANDRYIDAE.**TETRATOMA** Fab.

T. fungorum Fab. Sherwood Forest, in fungi on old trees, Oct. 1886 (*Blatch and Horner*). Taken in same locality in considerable numbers from Boleti growing on birch, Oct. 1904 (*Taylor*). Also taken in the Forest by Tomlin. Nottingham, in abundance, 1898-99 (*Ryles*).

T. desmaresti Latr. Sherwood Forest, under bark, Oct. 1886 (*Blatch and Horner*); taken also by Matthews (*Fowler, Brit. Coleop.*, v. 34).

CLINOCARA Thoms.

C. undulata Kr. Sherwood Forest, under bark of stumps, Oct. 1886 (*Blatch and Horner*); taken also in same locality by Bedwell, Taylor and Tomlin.

HALLOMENUS Panz.

H. humeralis Panz. Sherwood Forest, in old fungus on birch, June 1907 (*Taylor*); also taken by Messrs. Bedwell and Tomlin in same locality.

CONOPALPUS Gyll.

- C. testaceus** Ol., and var. *vigorsi* Steph. Sherwood Forest. Taken in profusion in 1867 (*C. Turner* in *Ent. Annual* for 1868, *sub nom. C. vigorsii*); June 1868, type and variety (*R. and W. Tyrer*); June 1869 and June 1870 (*J. Kidson Taylor*); June 1904, type and variety taken in small numbers on old oaks, the variety being more common than the type (*Taylor*). Both forms taken also by Messrs. Bedwell, Chaster and Tomlin.

MELANDRYA Fab.

- M. caraboides** L. South Leverton (*Thornley*). Trent Bridge, Nottingham (*Ryles*).

PHLOEOTRYA Steph.

- P. rufipes** Gyll. Sherwood Forest: first taken in June 1868 by Richard and Wm. Tyrer, and in June 1869 by J. Kidson Taylor; taken subsequently by Blatch and Horner, Tomlin and others.

PYTHIDAE.

SALPINGUS Gyll.

- S. castaneus** Panz. Sherwood Forest, taken not uncommonly by beating Scotch firs in June (*Taylor*). Sherwood Forest (*Bedwell*). Clumber (*Pegler*). Kingston-upon-Soar, Oct. 1910 (*Thornley*).

RHINOSIMUS Latr.

- R. ruficollis** L. Sherwood Forest, in numbers under decaying beech bark, October 1905 (*Taylor*). Sherwood Forest (*Bedwell*). Worksop (*Houghton*). Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham; Radcliffe-on-Trent (*Ryles*).
- R. viridipennis** Steph. Sherwood Forest (*Bedwell*). Tuxford (*Pegler*). South Leverton (*Thornley*). Nottingham; Beeston; Radcliffe-on-Trent (*Ryles*).
- R. planirostris** Fab. Sherwood Forest (*Bedwell, Taylor*). Worksop; Osberton, under bark of limes, 28. iii. 1906 (*Houghton*). Retford (*Pegler*). South Leverton; Nottingham (*Thornley*). North Wheatley (*Chamberlin*). Plumtree, 4. viii. 1914; Holme Pierrepont, 18. vi. 1914 (*Robinson*). Langford Moor, 14. viii. 1914 (*Morley*).

OEDEMERIDAE.

OEDEMERA Ol.

Oe. nobilis Scop. Clumber (*Pegler*).

NACERDES Schm.

N. melanura L. London Road, Nottingham, 1912; Sneinton, two specimens, June 1914 (*Saunt*).

ISCHNOMERA Steph.

I. coerulea L. Clifton Grove, Nottingham, 1898 and 1899 (*Ryles*).

I. sanguinicollis Fab. Sherwood Forest, on mountain ash flowers, *Blatch* (*Fowler, Brit. Coleop.*, v. 62). Mr. Pegler has a specimen of this species which was probably taken in the Retford district.

PYROCHROIDAE.

PYROCHROA Geoff.

P. serraticornis Scop. Sherwood Forest (*Taylor*). Worksop (*Houghton*). North Wheatley (*Chamberlin*). Retford district, common; Rampton, common, 8. vi. 1906; Kimberley; Kingston-upon-Soar (*Thornley*). Nottingham district (*Ryles, Saunt*). Bingham (*R. Pilling*). Stapleford (*Dawson*). Radcliffe-on-Trent, 27. v. 1912 and 12. vi. 1913; Hoveringham, 22. vi. 1912 (*Robinson*). East Leake, 3. vii. 1911, etc., common.

SCRAPTIIDAE.

SCRAPTIA Latr.

S. fuscula Müll. Sherwood Forest, by beating oaks, June 1870 (*J. Kidson Taylor*).

MORDELLIDAE.

MORDELLISTENA Costa.

M. abdominalis Fab. South Leverton, 2. vi. 1897, etc. (*Thornley*).

ANASPIS Geoff.

- A. frontalis** L. Sherwood Forest (*Taylor*). Retford district (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Nottingham district (*Ryles*). Radcliffe-on-Trent, 16. vi. 1910 (*Robinson*).
- A. garneysi** Fowl. Sherwood Forest, by sweeping, July 1908 (*Donisthorpe*).
- A. pulicaria** Costa. Radcliffe-on-Trent, 16. vi. 1910 (*Robinson*). Coppice Road, Nottingham, 19. vi. 1912 (*Thornley*).
- A. rufilabris** Gyll. Aspley Woods, Nottingham (*Ryles*, and 11. vii. 1912, *Carr*). Coppice Road, Nottingham, in garden, abundant, 19. vi. 1912 and 21. v. 1914 (*Thornley*). Watnall, 28. v. 1914; Nuthall, 9. vii. 1914 (*Robinson*). Aldercar Wood, Newstead, 29. vii. 1914.
- A. geoffroyi** Müll. Sherwood Forest (*Taylor*). South Leverton, and Retford district generally, common (*Thornley*). North Wheatley (*Chamberlin*). Nottingham; Gunthorpe (*Ryles*).
- A. ruficollis** Fab. Sherwood Forest (*Taylor*). Retford district, common (*Thornley* and *Pegler*). North Wheatley (*Chamberlin*). Nottingham district, very common; Radcliffe-on-Trent; East Leake; West Leake; Upton near Southwell (*Carr*). Gamston near Nottingham; Bulwell; Hucknall Torkard; Nuthall; Watnall; Arnold; East Bridgford (*Robinson*).
- A. subtestacea** Steph. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*). Upton near Southwell, 30. vi. 1913.
- A. maculata** Fourc. Sherwood Forest (*Taylor*). Retford district, common; Nottingham, common (*Thornley*). North Wheatley (*Chamberlin*). Arnold; Basford; Gamston; Radcliffe-on-Trent; East Bridgford; Cotgrave (*Robinson*). Aspley Woods; West Leake; Kirkby-in-Ashfield; Upton near Southwell.

RHIPIDOPHORIDAE.

METOECUS Gers.

- M. paradoxus** L. 'In this part of the country [*i.e.*, Nottinghamshire] there are few wasp nests without one or more of this insect' (*Wm. Howitt, Book of the Seasons*). North Wheatley, in wasps' nests, 1905 (*Chamberlin*).

ANTHICIDAE.

NOTOXUS Geoff.

- N. monoceros** L. 'With us on the banks of the Trent, in one spot, it is found in great abundance, at the roots of the tansy and the silver weed' (*Wm. Howitt, Book of the Seasons*). Barrow Hills, Everton, July 1905 (*Chamberlin*).

ANTHICUS Payk.

- A. floralis** L. Nottingham, 1899 (*Ryles*). South Leverton (*Thornley*).
 var. *quisquilius* Th. Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*).
A. antherinus L. Trent-bank, Rampton, 1906 (*Chamberlin*).

XYLOPHILIDAE.

XYLOPHILUS Latr.

- X. oculatus** Gyll. Sherwood Forest, sparingly by beating oaks, June 1870 (*J. K. Taylor and J. R. Hardy, E.M.M., Sept. 1870*); also in old fallen oak, June 1906 (*Taylor and Chaster*).

MELOIDAE.

MELOE L.

- M. proscarabaeus** L. Nottingham; Colwick Wood; Bulwell Forest, common: many *Halicti* and *Andrenae* captured on Bulwell Forest and at Gedling in spring had larvae of *Meloë* attached to them (*Carr*). Kimberley (*Thornley*). Clarborough Hill near Retford (*Chamberlin*).
M. violaceus Marsh. Bulwell Forest, Nottingham (*fide Ryles*).

ANTHRIBIDAE.

BRACHYTARSUS Sch.

- B. fasciatus** Först. South Leverton; Treswell Wood (*Thornley*). Tuxford; Gamston near Retford (*Pegler*). Thurgarton (*Ryles*).

- B. varius** Fab. Sherwood Forest (*Bedwell, Donisthorpe, Ryles, Taylor, Tomlin*). Treswell Wood, 7. v. 1898; South Leverton, on wall of vicarage, 5. vi. 1903; Langford Moor, not uncommon on firs, 29. vi. 1899 (*Thornley*). Crow Wood Hill, West Leake, 19. v. 1914.

CURCULIONIDAE.

RHINOMACER Fab.

- R. attelaboides** Fab. Sherwood Forest, June 1904, 'occurred in some numbers to my friends J. Ray Hardy and R. B. Lucas, and to myself by beating Scotch firs (*J. K. Taylor, E.M.M., July 1904, p. 158*).

APODERUS Ol.

- A. coryli** L. Treswell Wood, July 1897; and flying commonly about *Cerylus*, 4. vi. 1900 (*Thornley*).

ATTELABUS L.

- A. curculionoides** L. Sherwood Forest, very abundant on old oaks in June (*Taylor*); taken in same locality by Dr. A. R. Jackson and Messrs. Bedwell, Ryles, etc. Edwinstowe, 1. vii. 1911 (*Carr*). Barrow Hills, Everton (*Chamberlin*).

RHYNCHITES Schn.

- R. cupreus** L. Sherwood Forest (*S. Stevens*); in same locality in June 1868 (*R. and W. Tyrer*); abundant in flowers of mountain ash, *Blatch* ((*Fowler, Brit. Coleop., v. 123*); also taken by Fowler in 1893 (*E.M.M., July 1893, p. 63*).
- R. aequatus** L. Sherwood Forest (*Taylor, Bedwell*). Retford (*Pegler*). South Leverton (*Thornley*). Radcliffe-on-Trent (*Ryles*).
- R. aeneovirens** Marsh. Sherwood Forest (*Fowler, Taylor, Tomlin, Bedwell*). Gamston near Retford (*Chamberlin*).
- R. minutus** Herbst. Sherwood Forest (*Ryles, Bedwell*). South Leverton (*Thornley*). Glapton near Clifton, 15. v. 1915.
- R. interpunctatus** Steph. Sherwood Forest, June 1907 (*Donisthorpe*).
- R. pauxillus** Germ. Sherwood Forest, one specimen beaten off young birch, June 1903 (*Taylor*).

- R. nanus** Payk. Sherwood Forest (*Ryles, Taylor, Tomlin*). Langford Moor, on *Salix repens*, 29. vi. 1899 (*Thornley*), and in same locality, 14. viii. 1914 (*Morley and Carr*).
- R. pubescens** Fab. Sherwood Forest (*Ryles*); in same locality, sparingly on young oaks in June (*Taylor*). Gamston Wood near Retford (*Pegler*).

DEPORAUS Leach.

- D. megacephalus** Germ. Sherwood Forest, beaten from birch in June (*Taylor, 1906; Donisthorpe, 1907*). Barrow Hills, Everton; North Wheatley (*Chamberlin*). Langford Moor near Newark, several beaten from birch, 29. vi. 1899 (*Thornley*), and 14. viii. 1914 (*Carr*).
- D. betulae** L. Sherwood Forest (*Taylor, Jackson*). Gamston near Retford, 22. v. 1906 (*Chamberlin and Carr*). Langford Moor, common on birch, 29. vi. 1899 (*Thornley*), and 14. viii. 1914 (*Carr*). Nottingham district (*Ryles*).

APION Herbst.

- A. pomonae** Fab. Sherwood Forest (*Bedwell, Chaster, Taylor*). Treswell Wood (*Thornley*). Nottingham; Hazleford (*Ryles*).
- A. cracca** L. Sherwood Forest, one specimen by sweeping, June 1903 (*Taylor*). South Leverton, one specimen on hawthorn flowers, 2. vi. 1899; Treswell Wood, one by sweeping, 29. v. 1899 (*Thornley*). Hazleford (*Ryles*).
- A. subulatum** Kirby. Treswell Wood, 29. v. 1899 (*Thornley*).
- A. ulicis** Först. Sherwood Forest (*Carr, Taylor*). Gamston near Retford (*Chamberlin*). South Leverton; North Leverton, abundant on gorse, 4. v. 1901 (*Thornley*). Nottingham (*Ryles*). Bulwell (*Robinson*) Widmerpool, 12. viii. 1914; East Leake, 2. vi. 1915.
- A. miniatum** Germ. Retford district (*Pegler*). Kingston-upon-Soar, 28. vii. 1914 (*Thornley*). Glapton near Clifton, 13. iii. 1912 (*Carr*). Tollerton, 2. vi. 1912 (*Saunt*).
- A. cruentatum** Walt. Sherwood Forest (*Golding, Ryles*). North Wheatley (*Chamberlin*).
- A. haematodes** Kirby. Sherwood Forest (*Taylor*). Barrow Hills, Everton, 4. ix. 1903; Sutton gravel-pit near Retford (*Thornley*). Bulwell Forest, several, 21. vii. 1913.

- A. rubens** Steph. Sherwood Forest (*Fowler, Brit. Coleop.*, v. 143). Not uncommon in Sherwood Forest on *Rumex acetosella* in October 1905 (*Taylor*).
- A. viciae** Payk. Treswell Wood, one specimen by general sweeping, 29. v. 1899 (*Thornley*).
- A. difforme** Germ. Sherwood Forest (*Ryles*); one specimen in same locality, by sweeping, Aug. 1903 (*Taylor*).
- A. apricans** Herbst. South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Nottingham (*Ryles*). Crow Wood Hill, West Leake, 14. vi. 1913; East Leake, 4. viii. 1914 (*Carr*). Radcliffe-on-Trent, 25. ix. 1913; Papplewick and Linby, 28. iv. 1914; Gamston, 28. iv. 1915; Holme Pierrepont and East Bridgford, June 1914 (*Robinson*).
- A. bohemani** Thoms. East Leake, on *Ononis*, 3. vii. 1911.
- A. assimile** Kirby. Sherwood Forest, by sweeping, Aug. 1903 (*Taylor*). Kingston-upon-Soar, in tufts of grass, 29. iii. 1912 (*Woolley*).
- A. dichroum** Bed. Sherwood Forest (*Carr, Taylor, etc.*). Boughton; North Wheatley (*Chamberlin*). South Leverton; Treswell Wood, 29. v. 1899; Gotham, 22. viii. 1912 (*Thornley*). Nottingham (*Ryles, Saunt*). Langford Moor, 16. viii. 1912; Crow Wood Hill, West Leake, 15. vii.; Trent-side, Attenborough, 14. viii.; Widmerpool, 18. viii.—1913 (*Carr*). Radcliffe-on-Trent, 1. iv.; Linby, 28. iv.—1914 (*Robinson*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*).
- A. nigrিতarse** Kirby. Sherwood Forest (*Bedwell*). South Leverton; Treswell Wood, 29. v. 1899; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles*). Widmerpool, very common, 18. viii.; North Collingham, 25. viii.—1913; West Leake Hills, 17. v.; Normanton-on-the-Wolds, 12. viii.; Newstead, 13. viii.; Langford Moor, 14. viii.—1914; Thurgarton, 8. v. 1915 (*Carr*). Epperstone Park, 6. ix. 1913 (*Thornley and Carr*). Radcliffe-on-Trent, 25. ix.; Bulcote Wood, 17. x.; Cotgrave, 23. x.—1913; Arnold, 14. v.; Papplewick, 28. iv.; Plumtree, 4. viii.; Bramcote, 13. viii.—1914 (*Robinson*).
- A. hookeri** Kirby. Treswell Wood, one specimen by sweeping in green drive, 29. v. 1899 (*Thornley*). Grove near Retford (*Pegler*).
- A. aeneum** Fab. Sherwood Forest (*Taylor*). South Leverton, on *Malva*; Littleborough, on *Malva* by river bank, 14. vii. 1899 (*Thornley*).

- A. radiolus** Kirby. Sherwood Forest (*Taylor*). South Leverton, in vicarage garden; Littleborough, on *Malva* by river bank, 14. vii. 1899 (*Thornley*).
- A. onopordi** Kirby. Retford district (*Pegler*). North Wheatley (*Chamberlin*). Crown End Wood, West Leake (*Thornley*). North Collingham, 25. viii. 1913.
- A. carduorum** Kirby. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar; Gotham; West Leake (*Thornley*). Nottingham district (*Ryles*). Plumtree, 4. viii. 1914 (*Robinson*). Trent side, Attenborough, 14. viii.; North Collingham, 25. viii.; Epperstone Park, 6. ix.—1913.
- A. virens** Herbst. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham district (*Ryles*).
- A. astragali** Payk. Cottam, in a grass field, 1895 (*Pegler*). (There was no *Astragalus* in the neighbourhood).
- A. pisi** Fab. Sherwood Forest (*Taylor*). South Leverton; West Leake, 14. vi. 1913 (*Thornley*). Nottingham (*Ryles*). Trent-side, Attenborough, on *Ononis*, 14. viii. 1913; near Newbound Mill, Teversall, 26. vi. 1913.
- A. aethiops** Herbst. Sherwood Forest (*Taylor*). South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Southwell; Widmerpool (*Ryles*).
- A. striatum** Kirby. Sherwood Forest, beaten from gorse (*Tomlin*).
- A. immune** Kirby. Sherwood Forest (*Taylor*). Sutton near Retford, several on broom in gravel pit (*Thornley*).
- A. ononis** Kirby. East Leake, by sweeping *Ononis*, 3. vii. 1911.
- A. ervi** Kirby. Retford (*Pegler*). South Leverton; Treswell Wood, 29. v. 1899; Kingston-upon-Soar, 28. vii. 1914 (*Thornley*). Nottingham district (*Ryles*). Bulcote Wood, 17. x. 1913 (*Robinson*).
- A. vorax** Herbst. South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Upton near Southwell, 30. vi.; West Leake Hills, 21. viii.; North Collingham, 25. viii.—1913 (*Carr*). Cotgrave, 23. x. 1913; Clifton, 21. iv. 1914 (*Robinson*).
- A. loti** Kirby. Sherwood Forest (*Taylor*, *Bedwell*).
- A. seniculum** Kirby. Grove (*Pegler*).

A. simile Kirby. Grove (*Pegler*). Langford Moor, 14. viii. 1914 (*Morley and Carr*).

A. marchicum Herbst. Sherwood Forest, June 1889 (*Blatch*); in same locality by sweeping *Rumex acetosella*, Oct. 1905 (*Taylor*). Also taken in the Forest by *Ryles*.

A. violaceum Kirby. Sherwood Forest (*Taylor*); near Edwinstowe, 25. ix. 1913 (*Carr*). Retford (*Pegler*). South Leverton; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles*). East Leake, 19. and 26. v. 1912; Crow Wood Hill, West Leake, 10. iv. 1915 (*Carr*). Arnold, 14. v. 1914; Nuthall, 9. vii. 1914; Radcliffe-on-Trent, 6. v. 1915 (*Robinson*).

A. hydrolpathi Kirby. Southwell (*Ryles*).

A. humile Germ. Sherwood Forest (*Taylor*). South Leverton; Treswell Wood, 29. v. 1899; Kingston-upon-Soar (*Thornley*). Retford (*Pegler*). Nottingham (*Ryles*). West Leake, 14. vi. 1913; Langford Moor, 14. viii. 1914 (*Carr*). Beeston, 24. iv.; Papplewick, 5. vi.; Clifton, 21. iv.; Arnold, 14. v.; Holme Pierrepont, 18. vi.—all 1913-14; Gamston, 28. iv. 1915 (*Robinson*).

OTIORHYNCHUS Germ.

O. raucus Fab. Clumber (*Pegler*).

O. ligneus Ol. Sherwood Forest (*Fowler, Brit. Coleop.*, v. 178).

O. picipes Fab. Sherwood Forest (*Bedwell, Carr, Jackson, Taylor*). Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Langford Moor, 29. vi. 1899; Kingston-upon-Soar, 28. vii. 1914 (*Thornley*). Nottingham, not uncommon.

O. sulcatus Fab. Retford (*Pegler*). North Wheatley (*Chamberlin*). Nottingham district, Beeston, etc., common. Abundant, and causing great damage, at roots of *Saxifraga umbrosa* in garden in Nottingham Park, in 1907-8.

O. ovatus L. Sherwood Forest (*Bedwell, Taylor*). South Leverton (*Thornley*). Nottingham; Bulwell (*Ryles*).

STROPHOSOMUS Schön.

S. coryli Fab. Sherwood Forest (*Taylor*). Wellow Park, 20. ix. 1911; Nether Langwith, 19. viii. 1912; Langford Moor,

Newark, 29. vi. 1899 and 16. viii. 1912 (*Thornley and Carr*). Worksop (*Houghton*). Retford (*Pegler*). North and South Leverton (*Thornley*). Nottingham (*Ryles*).

S. capitatus De G. Sherwood Forest (*Taylor*). South Leverton; Epperstone Park, 6. ix. 1913 (*Thornley*). Nottingham (*Ryles*).

S. retusus Marsh. Sherwood Forest (*Bedwell, Golding*). Near Edwinstowe, Sherwood Forest, on *Calluna*, 25. ix. 1913 (*Carr*). Clumber Park (*Pegler*).

S. lateralis Payk. Sherwood Forest, by sweeping heather, very common, June 1903 (*Taylor*), and 10. viii. 1914 (*Morley and Carr*). Langford Moor, 14. viii. 1914.

EXOMIAS Bed.

E. araneiformis Schrk. South Leverton, in vicarage garden: a good many specimens caught by laying down a board, near lilies, and searching beneath it in the morning (*Thornley*). Retford (*Pegler*). North Wheatley (*Chamberlin*). Nottingham (*Saunt, Robinson*, etc.). Trent-side, Nottingham, 2. v. 1913; Sherwood Forest near Ollerton, June 1914.

OMIAS Schön.

O. mollinus Boh. South Leverton, common in hayfields at the end of May (*Thornley*). Arnold, 14. v. 1914 (*Robinson*).

BRACHYSOMUS Steph.

B. echinatus Bons. South Leverton (*Thornley*). Clumber (*Pegler*).

SCIAPHILUS Steph.

S. muricatus Fab. Sherwood Forest (*Bedwell*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Nottingham (*Ryles*).

TROPIPHORUS Schön.

T. tomentosus Marsh. Sherwood Forest (*Taylor*). South Leverton, not uncommon (*Thornley*). Gamston near Retford (*Chamberlin*). Nottingham; Beeston (*Ryles*).

LIOPHLOEUS Germ.

- L. nubilus** Fab. Worksop (*Houghton*). Retford (*Pegler*). South Leverton (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Mansfield; Lambley, 13. v. 1911 (*Saunt*). Beauvale (*J. Golding*). Nottingham (*Ryles*). Arnold, 14. v. 1914 (*Robinson*).

POLYDRUSUS Germ.

- P. micans** Fab. Nottingham (*Ryles*). Treswell Wood, on oak (*Thornley*).
- P. pterygomalis** Schön. Sherwood Forest (*Bedwell, Ryles, Taylor*). South Leverton (*Thornley*). Crow Wood Hill, West Leake, 19. v. 1914.
- P. cervinus** L. Sherwood Forest (*Jackson, Taylor*). The Birklands, on birch, 18. vii. 1901; South Leverton; Treswell Wood, 29. v. 1899; Langford Moor, 29. vi. 1899; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Retford (*Pegler*). Gamston near Retford, 22. v. 1906 (*Carr* and *Chamberlin*). Nottingham; Beeston (*Ryles*). Aspley Woods, 27. vi. 1912; Quarry Banks, Linby, 20. vii. 1914; Aldercar Wood, Newstead, 29. vii. 1914 (*Carr*). Bulwell Forest, 14. v. 1913 (*Robinson*). Calverton, 3. v. 1914 (*Saunt*).

PHYLLOBIUS Sch.

- P. oblongus** L. Retford (*Pegler*). Worksop (*Hodding*). Barrow Hills, Everton (*Chamberlin*). South Leverton; Rampton Marsh, 18. vii. 1899; Kingston-upon-Soar (*Thornley*). Nottingham and district (*Dodd, Robinson, Ryles, etc.*). Hucknall Torkard, 1. vi. 1911; Tollerton, 22. v. 1913 (*Robinson*). West Leake, 19. v. 1914.
- P. calcaratus** Fab. Sherwood Forest (*Taylor*). North Notts. (*Chamberlin*). Treswell Wood, 29. v. 1899; Sutton near Retford (*Thornley*). Aspley Woods, Nottingham (*Ryles*). Quarry Banks, Linby, 20. vii. 1914.
- P. urticae** De G. Common throughout the county.
- P. pyri** L. Sherwood Forest (*Taylor, Jackson*). Worksop (*Houghton*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton; Treswell Wood (*Thornley*). Markham Clinton (*Miss M. C. Atkinson*). Tollerton, 22. v. 1913; Arnold, 14. v. 1914; Watnall, 28. v. 1914 (*Robinson*). Nottingham district, frequent.

P. argentatus L. Sherwood Forest (*Donisthorpe*, *Jackson*, *Taylor*, etc.). Worksop (*Houghton*). Manton Woods near Worksop, 20. vi. 1907; South Leverton; Treswell Wood; East Park Wood, Laxton; Langford Moor; Kingston-upon-Soar (*Thornley*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). Gamston near Retford, 22. v. 1906; Aspley Woods, 18. v. 1912 (*Carr*). Papplewick (*Saunt*). Nottingham (*Dodd*).

P. maculicornis Germ. Sherwood Forest (*Taylor*, *Jackson*). Worksop (*Houghton*). Retford (*Pegler*). Barrow Hills, Everton (*Chamberlin*). South Leverton, on hazel (*Thornley*). Nottingham (*Ryles*, *Saunt*). Watnall, 28. v. 1914 (*Robinson*). Crow Wood Hill, West Leake, 19. v. 1914.

var. *cinereus* Fowl. Sherwood Forest, by beating young birches and oaks, June 1903 and 1905 (*Taylor*); taken in same locality by *Bedwell*.

P. pomonae Ol. Sherwood Forest (*Taylor*, *Bedwell*). South Leverton, often on *Achillea*; Treswell Wood, 29. v. 1899; Marnham, 14. vi. 1901; Carrington, Nottingham, several, 7. vi. 1906; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley*). Nottingham district (*Ryles*).

P. viridiaeris Laich. Common throughout the county.

TANYMECUS Sch.

T. palliatus Fab. South Leverton, on *Anthriscus sylvestris* (*Thornley*). Grove near Retford (*Pegler*).

PHILOPEDON Steph.

P. geminatus Fab. Sherwood Forest, frequent on *Plantago lanceolata* in June (*Taylor*); also taken there by *Tomlin*. Edwinstowe, 10. vi. 1908, common on dry sandy hedge bank in lane (*Bedwell*).

ATACTOGENUS Tourn.

A. exaratus Marsh. Sherwood Forest (*Fowler*, *Brit. Coleop.*, v. 209). Not scarce by sweeping along sandy hedge bank in lane at Edwinstowe, 10. vi. 1908 (*Bedwell*).

BARYNOTUS Germ.

B. obscurus Fab. Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, by evening sweeping, often from

Ranunculus repens; Nottingham; Radcliffe-on-Trent; Kingston-upon-Soar (*Thornley*). Nottingham district, common; Beeston (*Ryles*, etc.).

- B. elevatus** Marsh. Retford district (*Pegler*). Rampton (*Chamberlin*). Treswell Wood; West Leake (*Thornley*). Oxtun (*Saunt*).

ALOPHUS Sch.

- A. triguttatus** Fab. South Leverton, sometimes very common walking on the dusty high road (*Thornley*). River Trent at Nottingham; Barton-in-Fabis (*Ryles*).

SITONES Sch.

- S. griseus** Fab. Sherwood Forest, one specimen in moss, June 1905 (*Taylor*). Barrow Hills, Everton, Sept. 1905 (*Chamberlin*).

- S. regensteiniensis** Herbst. Sherwood Forest (*Taylor*). Sutton near Retford; Barrow Hills, Everton, on broom, 13. viii. 1901 (*Thornley*). Nottingham (*Ryles*). Oxtun, 3. v. 1914 (*Saunt*).

- S. crinitus** Herbst. Broadholme (*Pegler*).

- S. tibialis** Herbst. South Leverton; Cottam (*Thornley*). Barrow Hills, Everton (*Chamberlin*). Nottingham (*Ryles*).

- S. hispidulus** Fab. Worksop (*Houghton*). Barrow Hills, Everton (*Chamberlin*). Retford district (*Pegler*). South Leverton (*Thornley*). Nottingham (*Ryles*, *Saunt*, *Thornley*). Epperstone Park, 6. ix. 1913; Creswell Crags, 22. ix. 1913.

- S. humeralis** Steph. Barrow Hills, Everton, 4. ix. 1903 (*Thornley*). Worksop, 15. v. 1914 (*Hodding*). Ruddington, 8. ix. 1911 (*Robinson*).

- S. meliloti** Walt. Colwick (*Ryles*).

- S. flavescens** Marsh. South Leverton (*Thornley*). Nottingham district (*Ryles*). Arnold, 4. vi. 1914; Nuthall, 25. vi. 1914 (*Robinson*).

var. *longicollis* Fahr. Langford Moor, by sweeping, 16. viii. 1912.

- S. puncticollis** Steph. Sherwood Forest (*Taylor*). Worksop (*Houghton*). South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Aspley, Nottingham (*Ryles*).

- S. suturalis** Steph. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Gamston near Retford (*Chamberlin*). Cottam (*Thornley*).
- S. lineatus** L. Universally distributed and very common. At South Leverton Mr. Thornley and I once saw a plant of *Poterium* on the railway bank near Leverton station entirely covered with this insect: there must have been many hundreds of individuals present; other plants near by were also heavily infested.
- S. sulcifrons** Thunb. Retford (*Pegler*). North Wheatley (*Chamberlin*). South Leverton, common on pavements (*Thornley*). Nottingham (*Ryles*). Chilwell, May 1907 (*Carr*). Arnold, 4. vi. 1914 (*Robinson*).

HYPERA Germ.

- H. punctata** Fab. Gamston Wood near Retford (*Pegler*). North Wheatley (*Chamberlin*). Nottingham (*Ryles*). Kings-ton-upon-Soar, 22. viii. 1901 (*Thornley*).
- H. rumicis** L. South Leverton; Treswell Wood, several cocoons on *Rumex*, from which the beetles were hatched, 15. vii. 1899 (*Thornley*). Nottingham; Hazleford; Gunthorpe (*Ryles*).
- H. polygona** L. Retford (*Pegler*). Nottingham district (*Dodd*). Thorney, 15—19. viii. 1913 (*L. A. Carr*).
- H. suspiciosa** Herbst. Sherwood Forest (*Fowler*, *Brit. Coleop.*, v. 234). Retford (*Pegler*).
- H. variabilis** Herbst. South Leverton (*Thornley*). Nottingham district (*Dodd*). Clifton Grove (*Ryles*).
- H. murina** Fab. Clumber, one example, Aug. 1899 (*Pegler*).
- H. plantaginis** De G. Nottingham; Beeston (*Ryles*).
- H. trilineata** Marsh. Sherwood Forest (*Ryles*).
- H. nigrirostris** Fab. Retford district (*Pegler*). North Wheatley (*Chamberlin*). South Leverton; Treswell Wood, 29. v. 1899; Langford Moor, 29. vi. 1899; Nottingham (*Thornley*). Nottingham (*Ryles*).

LIOSOMA Steph.

- L. ovatum** Clair. Sherwood Forest (*Bedwell*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham; Aspley, in moss, 4. x. 1899 (*Ryles*). Roe Wood, Winkburn, 25. iv. 1914; Aldercar Wood, Newstead, 13. viii. 1914.

CURCULIO L.

- C. abietis** L. Sherwood Forest (*Ryles, Taylor, Tomlin*). Retford (*Pegler*). South Leverton (*Thornley*). Nottingham; Crown End Wood, West Leake, beaten from firs, 15. viii. 1904.

TRACHODES Germ.

- T. hispidus** L. Sherwood Forest (*Tomlin*).

ORCHESTES Ill.

- O. quercus** L. Sherwood Forest (*Carr, Taylor, Tomlin*). Worksop (*Houghton*). Treswell Wood, 15. vii. 1899, 7. v. 1900, one example on each date (*Thornley*). North Wheatley (*Chamberlin*). Thorney, Aug. 1913 (*L. A. Carr*). Nottingham district (*Ryles*). Langford Moor near Newark, 16. viii. 1912; Crow Wood Hill, West Leake, 14. vi. 1913 and 9. viii. 1914.
- O. scutellaris** Gyll. Sherwood Forest, by beating oaks, Aug. 1904, type and var. *semirufus* Gyll. (*Taylor*).
- O. alni** L. Sherwood Forest; Nottingham, type and var. *ferrugineus* Marsh. (*Ryles*).
- O. ilicis** Fab., var. *nigripes* Fowl. Treswell Wood (*Thornley*).
- O. avellanae** Don. Sherwood Forest (*Fowler, Taylor*).
- O. fagi** L. Sherwood Forest (*Ryles, Taylor, Tomlin*). Edwinstowe (*Pegler*).
- O. rusci** Herbst. Sherwood Forest (*Bedwell, Taylor*). Edwinstowe, 10. viii. 1914.
- O. stigma** Germ. Treswell Wood, one example, 7. v. 1898 (*Thornley*). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.
- O. salicis** L. Sherwood Forest (*Ryles*). Treswell Wood (*Thornley*). Langford Moor, 14. viii. 1914 (*Morley and Carr*).

RHAMPHUS Clair.

- R. flavicornis** Clair. Sherwood Forest (*Ryles, Tomlin*). South Leverton, common in hedge of vicarage garden (*Thornley*).

PROCAS Steph.

- P. armillatus** Fab. One specimen taken by sweeping along dry sandy hedge-bank in lane at Edwinstowe, Sherwood Forest, 10. vi. 1908 (*Bedwell*).

GRYPIDIUS Steph.

- G. equiseti** Fab. South Leverton; Treswell (*Thornley*). Aspley near Nottingham (*Ryles*).

ERIRHINUS Sch.

- E. bimaculatus** Fab. Gamston near Retford (*Chamberlin*). Clifton Grove near Nottingham (*fide Ryles*).
- E. acridulus** L. Retford district (*Pegler*). South Leverton; Treswell Wood, 27. vi. 1898 (*Thornley*). Nottingham district (*Ryles*).

DORYTOMUS Steph.

- D. vorax** Fab. South Leverton, on walnut, 8. vi. 1894 (*Thornley*). Retford (*Pegler*). Nottingham (*Ryles*).
- D. tortrix** L. Sherwood Forest near Edwinstowe, June 1912 (*L. A. Carr*). Nottingham (*fide Ryles*).
- D. maculatus** Marsh. Worksop (*Houghton*). Treswell Wood, 29. v. 1899; Cottam, 14. vii. 1899 (*Thornley*). Epperstone Park, 6. ix. 1913; Finningley and Misson, 22. ix. 1914.
- D. melanophthalmus** Payk., var. *agnathus* Boh. Littleborough, on willows; Epperstone Park, 6. ix. 1913 (*Thornley and Carr*).

TANYSPHYRUS Sch.

- T. lemnae** Fab. South Leverton (*Thornley*).

BAGOUS Sch.

- B. alismatis** Marsh. South Leverton, in kitchen garden of vicarage! (*Thornley*).

ANOPLUS Sch.

- A. plantaris** Naez. Sherwood Forest (*Taylor*). Langford Moor, on birch, 29. vi. 1899 (*Thornley*). Nottingham; Hazleford (*Ryles*).

TYCHIUS Germ.

T. meliloti Steph. Newark, in profusion on *Melilotus officinalis* in brick-pit on Beacon Hill, 29. vi. 1899 (*Thornley and Carr*).

MICCOTROGUS Sch.

M. picrostris Fab. Sherwood Forest (*Taylor*); in same locality, 12—17. vi. 1912 (*Dr. A. R. Jackson*). Retford (*Pegler*). South Leverton, one example in vicarage field, 8. v. 1899 (*Thornley*). Radcliffe-on-Trent (*Ryles*).

GYMNETRON Sch.

G. pascuorum Gyll. Sherwood Forest (*Bedwell, Chaster, Fowler, Taylor, Tomlin*). Worksop (*Houghton*). Retford district (*Pegler*).

G. antirrhini Payk. Trent-bank, Rampton, not uncommon in flowers of *Linaria vulgaris* in one spot, 18. vii. 1899 (*Thornley and Carr*). Found again in same place on 28. vi. 1901, commonly on the leaves and stems of the plant (*Thornley*).

MECINUS Germ.

M. pyrafter Herbst. Worksop (*Houghton*). Retford (*Pegler*). South Leverton, not uncommon under bark and by sweeping; river-bank, Rampton, from capsules of *Linaria vulgaris*, 7. x. 1899 (*Thornley*). Nottingham district, several, 1898 (*Dodd*). Widmerpool, 12. viii. 1914 (*Morley and Carr*).

ANTHONOMUS Germ.

A. ulmi De G. Retford (*Pegler*). Gamston near Retford (*Chamberlin*). South Leverton and Treswell Wood (*Thornley*). Nottingham (*Ryles*).

A. pedicularius L. Sherwood Forest (*Taylor*). Retford (*Pegler*). South Leverton (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Nottingham (*Ryles*).

A. pomorum L. South Leverton, not uncommon under bark of fruit trees (*Thornley*). Retford (*Pegler*). Chilwell (*Ryles*).

A. rubi Herbst. Retford; Clumber (*Pegler*). South Leverton, common; Treswell Wood; Gotham; Kingston-upon-Soar (*Thornley*). Nottingham (*Ryles*). Widmerpool, 18. viii. 1913; West Leake Hills, 21. viii. 1913; East Leake,

common, 4. viii. 1914; North Collingham, 25. viii. 1913; Park Drain, Misson, 22. ix. 1914 (*Carr*). Watnall, 28. v. 1914 (*Robinson*).

NANOPHYES Sch.

N. lythri Fab. 'Holm' [probably Broadholme] (*Pegler*).

CIONUS Clair.

C. scrophulariae L. Budby, Sherwood Forest, on *Scrophularia aquatica*, July 1899 (*Carr*). Retford (*Pegler*). Treswell Wood, 11. vii. 1899, in great profusion in all stages on *Scrophularia nodosa*, the plants being greatly disfigured by the slimy larvae: these form cocoons at the top of the plant just where the seed capsules would form, and these they greatly resemble (*Thornley* and *Carr*). North and South Leverton; East Park Wood, Laxton, on *S. nodosa*, 15. vi. 1906; Gotham, 9. viii. 1912; Crown End Wood, West Leake, Aug. 1904, in great abundance on *S. nodosa*; Lambley Dumble, 8. vi. 1912 (*Thornley*). Nottingham (*Ryles*). West Leake Hills; Cuckney Hay Wood, Nether Langwith.

C. hortulanus Marsh. Treswell Wood, a few examples on *Scrophularia nodosa*, 15. vii. 1899; East Park Wood, Laxton, on *S. nodosa*, 15. vi. 1906 (*Thornley*).

C. blattariae Fab. Retford district (*Pegler*). South Leverton; East Park Wood, Laxton, on *Scrophularia nodosa*, 15. vi. 1906; Lambley Dumble, 8. vi.; Kingston-upon-Soar, 24. vii.; Gotham, 9. viii.—all 1912 (*Thornley*). Nottingham (*Ryles*).

C. pulchellus Herbst. Sherwood Forest near Edwinstowe, June 1912 (*Carr*). Retford district (*Pegler*). South Leverton; Treswell Wood; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 (*Thornley*).

OROBITIS Germ.

O. cyaneus L. Clumber (*Pegler*). Treswell Wood, three specimens by sweeping violets, 7. v. 1900 (*Thornley*).

CRYPTORHYNCHUS Ill.

C. lapathi L. Willows on Trent-bank, Rampton, 8. vi. 1906, and at Littleborough (*Thornley*). Willows by River Trent, Nottingham (*vide Ryles*).

COELIODES Sch.

- C. rubicundus** Herbst. Sherwood Forest, by beating oaks and birches, June 1903 (*Taylor*); also taken in same locality by Ryles and Bedwell. Gamston Covert near Retford, 22. v. 1906.
- C. quercus** Fab. Sherwood Forest (*Ryles, Taylor, Bedwell*). Clumber (*Pegler*). South Leverton and Treswell Wood (*Thornley*).
- C. ruber** Marsh. Sherwood Forest, one specimen among a number of *C. erythroleucus* beaten from oaks, June 1908 (*Bedwell*).
- C. erythroleucus** Gmel. Sherwood Forest (*Taylor*); beaten from oaks in same locality, June 1908 (*Bedwell*). Littleborough (*Thornley*).
- C. quadrimaculatus** L. Sherwood Forest (*Taylor*). Creswell Craggs, 22. ix. 1913 (*Carr*). Retford district (*Pegler*). South Leverton; Treswell; Radcliffe-on-Trent, common; Gotham, 9. viii. 1912; Besthorpe, 13. vi. 1914; Misson, 22. ix. 1914 (*Thornley*). Nottingham district (*Ryles, Robinson, etc.*). Cotgrave, 22. x. 1913; East Bridgford, 11. vi. 1914; Stapleford, 13. viii. 1914 (*Robinson*). Bingham, 11. vi. 1907; Oxtou Bogs, 24. iv. 1913; Upton near Southwell, 30. vi. 1913; Clifton and Ruddington, 15. v. 1915.
- C. geranii** Payk. North Leverton, in profusion on *Geranium pratense* by side of Catchwater Drain, 5. vii. 1901; also at Treswell a few days later (*Thornley*).

POOPHAGUS Sch.

- P. sisymbrii** Fab. South Leverton, once in vicarage garden (*Thornley*). Nottingham (*Ryles*).
- P. nasturtii** Germ. 'Notts., *Stephens*' (*Fowler, Brit. Coleop.*, v. 340).

CEUTHORHYNCHUS Duv.

- C. assimilis** Payk. Sherwood Forest (*Taylor*). South Leverton, on *Cruciferae* (*Thornley*). Beeston, 13. viii. 1914 (*Robinson*). Nottingham, frequent.
- C. cochleariae** Gyll. Nottingham (*Ryles*).
- C. ericae** Gyll. Langford Moor, 14. viii. 1914 (*Morley*).
- C. erysimi** Fab. Retford (*Pegler*). South Leverton (*Thornley*). Nottingham district (*Ryles*). Aspley Woods, 27. vi. 1912.

- C. contractus** Marsh. South Leverton (*Thornley*). Aspley Woods, common in moss, 4. x. 1899 (*Ryles*). Papplewick, 28. iv. 1914 (*Robinson*). Kingston-upon-Soar, in tuft of grass, 29. iii. 1912 (*Woolley*).
- C. chalybaeus** Germ. Retford district (*Pegler*).
- C. quadridens** Panz. South Leverton, on flowers of horse-radish (*Thornley*). Widmerpool (*Ryles*).
- C. pollinarius** Först. Retford (*Pegler*). Sherwood Forest near Edwinstowe, 25. ix.; Creswell Crags, 22. ix.; Bulwell Forest, 21. vii.—1913; Thurgarton, 8. v. 1915 (*Carr*). South Leverton, on nettles; Radcliffe-on-Trent, 15. v. 1912 (*Thornley*). Nottingham district (*Ryles*). Papplewick, 9. x. 1913; Clifton; Arnold; Linby; Radcliffe-on-Trent; East Bridgford;—all April to June, 1914 (*Robinson*).
- C. viduatus** Gyll. Sherwood Forest (*Taylor*, *Hardy*,—see *Fowler*, *Brit. Coleop.*, v. 351-2).
- C. pleurostigma** Marsh. Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Carr*). South Leverton (*Thornley*). Nottingham district (*Ryles*).
- C. alliariae** Bris. Canal at Retford; South Leverton;—on *Erysimum* in both cases (*Thornley*).
- C. melanostictus** Marsh. Retford district (*Pegler*).
- C. arcuatus** Herbst. Sherwood Forest, *Gorham* (*Fowler*, *Brit. Coleop.*, v. 357).
- C. litura** Fab. Retford (*Pegler*). South Leverton; Cottam;—not uncommon on *Unicus arvensis* (*Thornley*). Nottingham district (*Ryles*). North Collingham, 25. viii. 1913; Widmerpool, 12. viii. 1914.

CEUTHORHYNCHIDIUS Duv.

- C. floralis** Payk. Sherwood Forest (*Taylor*). Worksop (*Houghton*). Retford (*Pegler*). North Notts. (*Chamberlin*). South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Nottingham (*Ryles*). Radcliffe-on-Trent, 21. vi. 1913, etc.
- C. pyrrhorhynchus** Marsh. Sherwood Forest (*Taylor*). Beeston (*Ryles*).
- C. troglodytes** Fab. Sherwood Forest (*Bedwell*, *Taylor*). North Wheatley (*Chamberlin*). Treswell Wood, 29. v. 1899; Littleborough (*Thornley*). Nottingham; Gunthorpe (*Ryles*). Bingham; Epperstone Park, 6. ix. 1913; Widmerpool, 12. viii. 1914.

RHINONCUS Steph.

R. pericarpus L. Retford; Clumber (*Pegler*). South Leverton (*Thornley*). Nottingham district (*Ryles*).

R. gramineus Fab. Retford; Cottam (*Pegler*).

R. perpendicularis Reich. South Leverton, in Delph (*Pegler*). Nottingham district (*Ryles*).

R. castor Fab. Sherwood Forest, June 1889 (*Blatch*); in same locality at roots of grasses in sandy places, Oct. 1905 (*Taylor*); also taken in the Forest by *Ryles*. Clumber (*Pegler*). Gamston near Retford (*Chamberlin*). Littleborough (*Thornley*). Epperstone Park, 6. ix. 1913.

LITODACTYLUS Redt.

L. leucogaster Marsh. Sherwood Forest (*Ryles*). Clumber (*Pegler*).

PHYTOBIUS Schm.

P. 4-tuberculatus Fab. South Leverton, one example in vicarage field, 8. v. 1899 (*Thornley*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley and Carr*).

BARIS Germ.

B. lepidii Germ. Hazleford (*Ryles*).

BALANINUS Germ.

B. venosus Grav. Sherwood Forest (*Bedwell, Fowler*).

B. nucum L. Sherwood Forest near Edwinstowe, June 1912 (*Carr*). South Leverton, one specimen from top of church tower (*Thornley*).

B. betulae Steph. Sherwood Forest, two specimens, August 1903, and three—2 ♂ ♂, 1 ♀—taken by beating oaks at end of June 1904 (*Taylor*).

B. villosus Fab. Sherwood Forest (*Bedwell, Carr, Taylor, Tomlin*). North Leverton, one, 7. v. 1901; Treswell Wood, one, 27. vi. 1898 (*Thornley*).

B. salicivorus Payk. Retford district (*Pegler*). East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Nottingham district (*Ryles*).

B. pyrrhoceras Marsh. Sherwood Forest (*Bedwell, Ryles, Taylor, Tomlin*). Treswell Wood, on oak, 4. vi. 1900

(*Thornley*). Crow Wood Hill, West Leake, 1 ♂ and 5 ♀ ♀, 14. vi. 1913 (*Thornley and Carr*).

CALANDRA Clair.

C. granaria L. Worksop (*Houghton*). Retford district (*Pegler*). South Leverton, in corn (*Thornley*).

C. oryzae L. Retford district, in old mills (*Pegler*). South Leverton, in a jar of rice; Sturton-le-Steeple (*Thornley*). Nottingham, 1. xi. 1909.

COSSONUS Clair.

C. ferrugineus Clair. Sherwood Forest, under oak-bark, June 1886 (*Blatch*).

RHYNCOLUS Steph.

R. lignarius Marsh. Sherwood Forest (*Blatch, Taylor, Tomlin*). Grove near Retford (*Pegler*).

R. gracilis Rosen. Sherwood Forest, three specimens in birch wood, (*Blatch, F.M.M.*, 1884-5, p. 36); again in June 1889 (*Blatch*).

R. ater L. Sherwood Forest, *Turner* (*Fowler, Brit. Coleop.*, v. 394); taken in same locality by Mr. Kidson Taylor.

MAGDALIS Germ.

M. carbonaria L. Sherwood Forest:—one specimen beaten from birch, June 1905 (*Taylor*); a few by beating birches, June 1907 (*Donisthorpe*); by beating birches, May 1912 (*E. W. Morse*); also taken by E. C. Bedwell and Dr. Jackson.

M. armigera Fourc. Sherwood Forest (*Chaster, Fowler*). South Leverton (*Thornley*). Nottingham district (*Ryles*).

M. cerasi L. Sherwood Forest:—one beaten out of old hawthorn, June 1903, and one in May 1904; five, by beating dead twigs, June 1905 (*Taylor*). Also taken by E. C. Bedwell.

M. pruni L. Sherwood Forest (*Taylor*). North and South Leverton (*Thornley*). Nottingham district (*Ryles*).

SCOLYTIDAE.

SCOLYTUS Müll.

S. destructor Ol. Sherwood Forest, under bark, Sept. 1885 (*Blatch*). Retford (*Pegler*). Nottingham district (*Ryles*).

Crown End Wood, West Leake, boring in wood of felled elms, 3. vii. 1915 (*Carr and Thornley*).

S. intricatus Ratz. Sherwood Forest, on felled oaks, June 1868 (*Taylor*); in same locality, June 1889 (*Blatch*), and 23. vi. 1907 (*Donisthorpe*).

S. multistriatus Marsh. Sherwood Forest (*Chaster*).

HYLASTES Er.

H. ater Payk. Sherwood Forest (*Chaster, Taylor, Tomlin*). South Leverton, 5. vi. 1900 (*Thornley*).

H. opacus Er. Sherwood Forest (*Fowler, Brit. Coleop.*, v. 413). Worksop (*Houghton*).

HYLESINUS Fab.

H. crenatus Fab. Worksop (*Houghton*). Tuxford (*Pegler*).

H. oleiperda Fab. Burton Joyce (*Ryles*).

H. fraxini Panz. Sherwood Forest (*Taylor*). Worksop (*Houghton*). North Wheatley (*Chamberlin*). South Leverton; Treswell Wood, swarming on prostrate logs of ash; Kelham Bridge near Newark, 14. iii. 1912; Kingston-upon-Soar, 22. viii. 1901 (*Thornley*). Nottingham district, frequent.

H. vittatus Fab. In elm rails in meadows near the Trent near Beeston, in company with *Nemosoma elongatum*, parasitic upon the *Hylesinus*, Nov. 1871 (*J. Sidebotham*).

MYELOPHILUS Eich.

M. piniperda L. Nottingham (*Ryles*).

DRYOCAETES Eich.

D. villosus Fab. Sherwood Forest (*Bedwell, Ryles, Taylor*). Retford (*Pegler*).

TOMICUS Latr.

T. laricis Fab. Sherwood Forest, under bark, September 1885 (*Blatch*).

TRYPODENDRON Steph.

T. domesticum L. Sherwood Forest:—June 1868 (*Taylor*); under bark, Oct. 1886 (*Blatch and Horner*); also taken by

Messrs. Bedwell, Ryles and Tomlin. Library at Welbeck Abbey, March 1905 (*R. W. Goulding*).

- T. quercus** Eich. Sherwood Forest (*Rev. A. Matthews, Ent. Ann.* for 1867, p. 93); in same locality, June 1868 (*Taylor*). 'Occurs in considerable numbers in Sherwood Forest, where it has been taken by Mr. Matthews, Mr. Blatch, myself and others' (*Fowler, Brit. Coleop.*, v. 446).

DIPTERA (*Flies*).

The insects belonging to this Order are easily recognized by their possessing only one pair of membranous and nearly transparent wings; behind these, in the place of the hind-wings, are a pair of stalked knobs, the 'halteres' or 'balancers.' A few, mostly parasitic, flies are, however, wingless. The head is remarkable for its great mobility, being connected with the thorax by a neck which is so slender and flexible as to permit of nearly complete rotation. The eyes are very large, often occupying the greater part of the visible surface of the head. The mouth parts are adapted for piercing and sucking, or for suction only. The divisions of the thorax are fused together. The metamorphosis is complete; the larvae are usually legless grubs or maggots, feeding upon all kinds of animal and vegetable refuse, or inside living plant-tissues where they sometimes give rise to galls, or they are predaceous or parasitic; some are aquatic. The pupa in many cases is covered with a hardened cuticle which fastens the appendages more or less completely to the body, or it is enclosed within a tough capsule—the 'puparium'—formed from the last larval skin, and the appendages are free. The mature insects are as diverse in their habits as the larvae. Many live by sucking the blood of vertebrate animals, others prey upon other insects, and an enormous number live on decaying animal or vegetable matter or suck nectar from flowers.

The Order is usually subdivided into two sub-orders: (1) the *Orthorrhapha*, characterised by the pupa-skin splitting longitudinally down the back to allow the imago to emerge; and (2) the *Cyclorrhapha*, in which the puparium opens at the anterior end by a circular lid. The *Orthorrhapha* are further divided into two series or groups: (i) the *Nematocera* with slender antennae composed of seven or more segments, and (ii) the *Brachycera* with antennae of three to five segments and sometimes a terminal bristle or 'arista'. The flies of the sub-order *Cyclorrhapha* have short three-jointed antennae, the third segment bearing a bristle or arista which is not terminal but usually arises from the upper edge of the segment.

The Order is an immense one, and the 40,000 or 50,000 described species are probably only a fraction of the total number of existing forms. Over 3,000 British species are known, and there are doubtless many more still unrecorded. The Nottinghamshire species enumerated below comprise considerably less than one third of this number, but there are very many species in the writer's collection which have not yet been determined.

The Diptera are not in much favour with entomologists, and the species in the following list have nearly all been collected by the Rev. A. Thornley, Messrs. L. A. Carr, F. M. Robinson, and myself. Mr. J. W. Saunt is also responsible for some interesting records.

There is no good general work on the British Diptera, and few named public collections; hence it is very difficult to get one's captures authoritatively named. The writer has, however, been particularly fortunate in enlisting the co-operation of most of the leading British specialists in the Order, to one or other of whom practically every species in this list has been submitted. The Rev. A. Thornley, besides being responsible for a large proportion of the records, has rendered invaluable help in naming species of nearly every family, including the whole of the Syrphidae; the Rev. A. E. Eaton determined the Psychodidae; Mr. F. W. Edwards, of the British Museum, the Nematocera (except Cecidomyiidae and Psychodidae); Mr. J. E. Collin the Empidae, Phoridae, *Limosina*, etc.; Mr. C. G. Lamb the Dolichopodidae, and many species of most families of the Acalyptratae; and Mr. Percy H. Grimshaw identified the Anthomyiidae.

The arrangement in this list is, in the main, that of Verrall's *List of British Diptera*, 2nd edition, 1901; but where changes have been made by Verrall in his more recent publications, or suggested by the specialists mentioned, these have been adopted.

ORTHORRHAPHA.

NEMATOCERA.

CECIDOMYIDAE.*

*Owing to the extreme difficulty in identifying these tiny flies the records for the species which follow are mostly given on the evidence afforded by their galls. The specimens bred by Mr. G. B. Rothera were determined by the late Mr. E. A. Fitch. For the classification and nomenclature see Collin, *Ent. Mo. Mag.*, April 1904, p. 93.

RHABDOPHAGA Westw.

- R. rosaria** Lw. Forms the well-known and conspicuous leaf-rosettes on the ends of willow twigs. Wellow (*Becher*). North Leverton; Kingston-upon-Soar (*Thornley*). Nottingham district, common.
- R. salicis** Schrk. Oxtun, forming tumours on twigs of *Salix caprea* and other willows (*Rothera*).

PERRISIA Rond.

- P. crataegi** Winn. Causes the crowding together and distortion of the terminal leaves of hawthorn twigs. South Leverton and Retford district generally, abundant; Wilford; Clifton; Ruddington; Kingston-upon-Soar; etc., common (*Thornley and Carr*).
- P. filicina** Kieff. Blidworth, galls on *Pteris aquilina*.
- P. galii** Lw. Wilford, bred from galls on *Galium verum* (*Rothera*). Galls on *G. verum*, Barrow Hills, Everton; Shireoaks Park; East Park Wood, Laxton; Newark; Kingston-upon-Soar (*Thornley*).
- P. inchbaldiana** Mik. Notts., bred from galls on willow leaves (*Rothera*).
- P. marginemtorquens** Bremi. Galls on willows near Leverton railway station, and at Kingston-upon-Soar (*Thornley*).
- P. plicatrix** Lw. Oxtun, galls on *Rubus* (*Rothera*).
- P. rosarum** Hardy. Nottingham district, bred from galls on leaves of *Rosa canina* (*Rothera*).
- P. taxi** Inch. South Leverton, galls on *Taxus baccata*; Kingston-upon-Soar, on yews in Hall garden (*Thornley*).
- P. tiliamvolens** Rübs. Nottingham and Arnold, bred from galls on lime (*Rothera*). Shireoaks Park, galls on lime trees (*Thornley*). Sherwood, Nottingham; High Park Woods, Beauvale; Lowdham; galls abundant on lime twigs.
- P. ulmariae** Bremi. Galls on leaves of *Spiraea ulmaria*, common. South Leverton and surrounding district; Kingston Park (*Thornley*). Linby; Aldercar Wood, Newstead; Beauvale Woods; Bulwell Forest, near the spring; Clifton; etc.
- P. urticae** Perr. Galls on *Urtica dioica*, common. South Leverton and surrounding district; Blidworth; Gotham (*Thornley*). Sherwood, Nottingham; Clifton; etc.

- P. veronicae** Vall. Galls on *Veronica chamaedrys*. Common and generally distributed in the county.

OLIGOTROPHUS Latr.

- O. annulipes** Hart. Kingston-upon-Soar, galls on leaves of *Fagus sylvatica*, 20. vii. 1908 (*Thornley*).
O. bursarius Bremi. Linby, bred from galls on *Nepeta glechoma* (*Rothera*). Clifton Grove, 7. ix. 1910.
O. capreae Winn. Bred from galls on leaves of *Salix caprea* from Linby (*Rothera*). Foss-road, Widmerpool, galls on leaves of *S. caprea*, 25. ix. 1912.
O. lemeei Kieff. Galls on leaves, petioles and twigs of low shrubs of wych-elm near Worksop, July 1909 (*E. Maude Alderson* in *E.M.M.*, Sept. 1909).

CONTARINIA Rond.

- C. tritici** Kirby. Kingston-upon-Soar, 27. vii. 1905 (*Thornley*).

CLINODIPLOSIS Kieff.

- C. botulariae** Winn. Galls on leaves of *Fraxinus excelsior*, Kingston-upon-Soar, 29. vii. 1909 (*Thornley*).

LESTREMIA Meq.

- L. sp.** Roe Wood, Winkburn, 13. iv. 1915.
L. sp. Thurgarton, 8. v. 1915.

MYCETOPHILIDAE.

SCIARA Meig.

- S. thomae** L. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Oxton Bogs, 14. vii. 1915.
S. carbonaria Mg. Sherwood, 25. viii. 1912, 29. v. and 3. vi. 1915, and Mapperley, Nottingham, 29. viii. 1914; Sherwood Forest near Edwinstowe and Ollerton, June 1912-14; near Newbound Mill, Teversall, 25. v. 1915; Lambley Dumble, 22. v. 1915 (*Carr*). Nuthall, 24. v. 1915 (*Robinson*).
S. longiventris Zett. Mapperley, Nottingham, May 1913 (*Thornley*).
S. flavipes Mg. Thurgarton, 8. v. 1915.

ZYGONEURA Meig.

- Z. sciarina** Mg. Radcliffe-on-Trent, 16. xii. 1912 (*Robinson*).

CORDYLA Meig.

- C. crassicornis** Mg. Crow Wood Hill, West Leake, 10. iv. 1915.

DYNATOSOMA Winn.

- D. fuscicorne** Mg. South Leverton, May 1901 (*Thornley*).

MYCETOPHILA Meig.

- M. punctata** Mg. South Leverton, 20. i. and 9. ii. 1898 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Sneinton, Nottingham, May 1913 (*Saunt*).
- M. lineola** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- M. signatoides** Dzied. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*).
- M. cingulum** Mg. South Leverton, a ♂, Oct. 1897 (*Thornley*).
- M. rufescens** Zett. Near Newbound Mill, Teversall, 26. vi. 1913.

RHYMOSIA Winn.

- R. domestica** Mg. Mapperley, Nottingham, 13. ix. 1912 (*Thornley*). Crow Wood Hill, West Leake, 9. viii. 1914; East Leake, 10. iv. 1915.

EXECHIA Winn.

- E. fungorum** De G. South Leverton, 26. i. 1898 (*Thornley*).

MYCOTHERA Winn.

- M. dimidiata** Staeg. South Leverton, 28. ii. 1898 (*Thornley*).

PHRONIA Winn.

- P. nitidiventris** Wulp. Roe Wood, Winkburn, 13. iv. 1915.
- P. forcipula** Winn. Thurgarton, 8. v. 1915.
- P. crassipes** Winn. East Leake, 11. viii. 1912.

SCEPTONIA Winn.

- S. nigra** Mg. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

GLAPHYROPTERA Winn.

- G. fascipennis** Mg. South Leverton, ♀ ♀, 1894-6 (*Thornley*).
G. subfasciata Mg. Sherwood Forest near Ollerton; East
Leake, 11. viii. 1912; Aspley Woods, 28. viii. 1912 (*Carr*).
East Bridgford, 11. vi. 1914 (*Robinson*).

BOLETINA Staeg.

- B. trivittata** Mg. Thurgarton, 8. v. 1915; near Newbound
Mill, Teversall, 25. v. 1915.
B. plana Walk. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

EMPALIA Winn.

- E. vitripennis** Mg. Sherwood Forest near Ollerton, June
1914 (*L. A. Carr*). Attenborough, 5. vi. 1915.

PARATINIA Mik.

- P. sciarina** Mik. Sherwood Forest near Ollerton, July 1912
(*L. A. Carr*).

APOLIPHTHISA Grzeg.

- A. subincana** Curt. Thurgarton, 8. v. 1915.

PLATYURA Meig.

- P. semirufa** Mg. Crow Wood Hill, West Leake, 9. viii. 1914;
Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.
P. fasciata Mg. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).
P. nemoralis Mg. Sherwood Forest near Edwinstowe and
Ollerton; Crow Wood Hill, West Leake, 17. vi. 1914;
East Leake, 2. vi. 1915; Attenborough, 8. vi. 1915.

MACROCERA Meig.

- M. fasciata** Mg. Sherwood Forest near Ollerton, 24. vii. 1912.

M. lutea Mg. Aspley Woods near Nottingham, 27. vi. 1912; Sherwood Forest near Ollerton, 24. vii. 1912.

M. centralis Mg. Aspley Woods, 18. v. 1912; Sherwood Forest near Edwinstowe, 12. vi. 1912, and near Ollerton, June 1914.

M. stigma Curt. Aspley Woods, 18 and 28. v. 1912.

BOLETOPHILA Meig.

B. cinerea Mg. Roe Wood, Winkburn, 18. iv. 1915.

SYMMERUS Walk. (*Plesiastina* Winn.)

S. annulatus Mg. Aspley Woods, 11. vi. 1912.

BIBIONIDAE.

SCATOPSE Geoffr.

S. notata L. South Leverton, 18. iii. 1898 (*Thornley*). Skegby, 25. v. 1915; Nottingham, 16. iv. 1898 and 5. v. to 5. vi. 1915; East Leake, 19. v. and 30. vi. 1912; Glapton near Clifton, 15. v. 1915 (*Carr*). Tollerton, 22. v. 1913 (*Robinson*). Bradmore, 19. iv. 1914 (*Saunt*).

S. scutellata Lw. Mapperley, Nottingham, 18. ix. 1912 (*Thornley*). Linby, 18. ix. 1912.

S. inermis Ruthé. East Leake, common, 19. vi. 1912; Crow Wood Hill, West Leake, 24. vii. 1912 and 14. vi. 1913; near Newbound Mill, Teversall, 8. viii. 1912; Sherwood, Nottingham, 8. vi. 1914.

S. coxendix Verr. 'Mapperley Edge,' Sherwood, Nottingham, 19. vi. 1913.

S. minutissima Verr. (?) East Leake, 19. vi. 1912.

S. recurva Lw. Skegby, 25. v.; East Leake, 2. vi.; Attenborough, 5 and 8. vi.; Sherwood, Nottingham, 10. vi.—all 1915.

S. brevicornis Mg. Skegby, 25. v.; East Leake, 2. vi.; Attenborough, 8. vi.; Sherwood, Nottingham, 21. v.—all 1915.

DILOPHUS Meig.

D. febrilis L. Generally distributed and abundant. In the spring of 1899 the larvae caused great damage to the early lettuces in the Nottingham district.

- D. albipennis** Mg. Sherwood Forest, about Edwinstowe and Ollerton, June; Nottingham, 30. v. and 2. viii.; Aspley Woods, 28. v.; Radcliffe-on-Trent, 25 and 29. v.; East Leake, 19. v. and 9. vi.—all 1912; Crow Wood Hill, West Leake, 27. v. 1913; near Newbound Mill, Teversall, 25. v. 1915 (*Carr*). Tollerton, 22. v. 1913 (*Robinson*).
- D. humeralis** Zett. Attenborough, 27. vii.; Bulwell Forest, 8. viii.—1912.

BIBIO Geoffr.

- B. marci** L. Common throughout the county.
- B. leucopterus** Mg. Aspley Woods, 18. v. 1912; Sherwood Forest near Ollerton, June 1914; near Newbound Mill, Teversall, 25. v. 1915.
- B. ferruginatus** Gmel. Nottingham, 30. v. 1913.
- B. venosus** Mg. Aspley Woods, 18. v. 1912; Sherwood Forest near Ollerton, June 1914; Crow Wood Hill, West Leake, 14. vi. 1913.
- B. nigriventris** Hal. Worksop (*Hodding*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Nottingham, May 1913-15; West Leake Hills, ♂ ♂, 15. iv. 1914 (*Thornley* and *Carr*). Gedling, 22. v. 1915.
- B. varipes** Mg. South Leverton, one ♀, May 1896 (*Thornley*). By the Trent, Nottingham, 15. v. 1914.
- B. laniger** Mg. Roe Wood, Winkburn, 25. iv. 1914; Ollerton, June 1914; Mapperley Plains, Nottingham, 22. v. 1915.
- B. johannis** L. Common throughout the county.
- B. clavipes** Mg. Trowell, 5. x. 1913 (*Saunt*). Lambley Dumble, 3. x. 1912; Papplewick, 9. x. 1913; Gotham, 26. ix. 1912 (*Robinson*). Nottingham, 15. v. 1914; West Leake, 20. x. 1912.

SIMULIDAE.

SIMULIUM Latr.

- S. ornatum** Mg. South Leverton, 19. iii. 1898 (*Thornley*). Clumber, April 1897 (*S. Pegler*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, abundant, 10. iv. 1915; Rushcliffe Halt, East Leake, 10. iv. 1915.

- S. austeni** Edw. (?) Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- S. argyreatum** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Radcliffe-on-Trent, 24. ix. 1914 (*Robinson*). Crow Wood Hill, West Leake, 10. iv. 1915.
- S. equinum** L. Aspley Woods near Nottingham, 3. iv. 1912; Radcliffe-on-Trent, 10. vii. 1912; Attenborough, 14. viii. 1913; Crow Wood Hill, West Leake, very common, 10. iv. 1915, and a few at East Leake on same date; Thurgarton, 8. v.; Attenborough, 8. vi.—1915 (*Carr*). Clifton, 21. iv. 1914; Beeston, 27. iii. 1914; Gotham, 26. ix. 1912; Tollerton, 23. v. 1913; Burton Joyce, 20. ii. 1914 (*Robinson*).
- S. latipes** Mg. Aspley Woods, 4. vii. 1912; Skegby, 25. v. 1915.
- S. aureum** Fries. (?) South Leverton, April 1901 (*Thornley*).

CHIRONOMIDAE.

CORYNONEURA Winn.

- C. sp. nov.** (?) A number of specimens of a very minute species appeared in an aquarium newly stocked with water weeds taken from the River Trent near Trent Bridge, Nottingham, in October 1914.

CHIRONOMUS Meig.

- C. plumosus** L. Nottingham (Sherwood, 14. v. 1915, and Bagthorpe, 6. v. 1900); Sherwood Forest near Ollerton and Edwinstowe, common, June and July, 1912—14 (*Carr*). Mansfield, 1. vi. 1913 (*Saunt*). Kingston-upon-Soar, Aug. 1904 (*Thornley*).
- C. ferrugineovittatus** Zett. (?) Thorney, 15 to 19. viii. 1913 (*L. A. Carr*).
- C. prasinus** Mg. (?) Nottingham, 19. v. 1914.
- C. annularis** De G. Lenton, 29. v.; Wilford, 6. vi.; Tollerton, 22. v.—1913 (*Robinson*). Nottingham and Bingham, April 1912.
- C. moerens** Walk. Aspley Woods near Nottingham, 3. iv. 1912.
- C. riparius** Mg. Beeston, 24. iv. 1913 (*Robinson*). Nottingham, 29. iv. 1913; Sherwood Forest near Edwinstowe, 30. viii. 1912, and near Ollerton, June 1914.
- C. dorsalis** Mg. Nottingham, 11. v. and 8. vi. 1912; Linby, 18. ix. 1912 (*Carr*). Radcliffe-on-Trent, 12. ix. 1912

- (*Robinson*). Sherwood Forest near Ollerton, July 1912 and June 1914; Thorney, Aug. 1913 (*L. A. Carr*).
- C. venustus** Staeg. Papplewick, 28. iv. 1914 (*Robinson*). Glapton near Clifton, 15. v. 1915.
- C. nigroviridis** Mcq. Nottingham, 17. v. 1913 (*Carr*). Lenton, 29. v. 1913; Tollerton, 22. v. 1913 (*Robinson*).
- C. aprilinus** Mg. Attenborough, by ditch in field adjoining church, 8. vi. 1915.
- C. anthracinus** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- C. tentans** Fab. Nottingham, June 1913-14; Bulwell Forest, 2 and 8. viii. 1912, etc.; East Leake, 19. v. 1912.
- C. scalaenus** Schrk. By the river, Radcliffe-on-Trent, 25. iv. 1912.
- C. rufipes** L. Canal near Retford, 5. vi. 1900 (*Thornley*). Sneinton, Nottingham, 18. viii. 1914 (*Saunt*).
- C. chloris** Mg. Gamston near Nottingham, 25. iv. 1912; Papplewick, 28. iv. 1914 (*Robinson*). Thurgarton, 8. v. 1915.
- C. dispar** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Near Newbound Mill, Teversall, 22. v. 1915.
- C. pedellus** De G. Sherwood Forest near Edwinstowe, 12. vi. 1912; Thurgarton, 8. v. 1915; Nottingham, 18. v. 1915.
- C. zonarius** Walk. Nottingham, 2. v. 1898.
- C. viridis** Mcq. Bulwell, 6. vii. 1912; Attenborough, 14. viii. 1913; Radcliffe-on-Trent. (The identification of the specimens from the last two localities is not quite certain).
- C. monochromus** Wulp. Papplewick, 5. vi. 1913 (*Robinson*). Thorney, Aug. 1913 (*L. A. Carr*).
- C. brevitibialis** Zett. (?) Radcliffe-on-Trent, 25. v. 1912.
- C. nigrimanus** Staeg. Attenborough, 14. viii. 1913.
- C. histrio** Fab. This species was very abundant at Thurgarton by the stream in the grassy lane between the village and the railway, 8. v. 1915; it also occurred at Glapton near Clifton, 15. v. 1915.
- C. albimanus** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*). East Leake, 2. vi.; Sherwood, Nottingham, 9. vi.—1915.

C. sp. (*fuscitarsis* Verr. MS.). Cotgrave, 27. vi. 1912 (*Robinson*).

CRICOTOPUS Wulp.

C. bicinctus Mg. Sherwood Forest near Ollerton, common in June 1914; Nottingham, very common; Aspley Woods; Glapton near Clifton; Ruddington; Attenborough; Thurgarton (*Carr*). Arnold; Clifton Grove; Papplewick; Radcliffe-on-Trent; Crow Wood Hill, West Leake (*Robinson*). Taken from April 17th to end of June.

C. annulipes Mg. Nottingham, very common; Attenborough; Glapton near Clifton; Ruddington; Radcliffe-on-Trent; Thurgarton; Car Colston (*Carr*). Gamston near Nottingham; Crow Wood Hill, West Leake (*Robinson*). Taken from April 11th to July 18th.

C. tricinctus Mg. Sherwood Forest near Ollerton, July 1912 and June 1914 (*L. A. Carr*). Ruddington, common, 15. v. 1915.

C. sylvestris Fab. Attenborough, 5. vi. 1915.

ORTHOCLADIUS Wulp.

O. variabilis Staeg. East Leake, 2. vi. 1915.

O. nitidicollis Walk. Beeston, 9. iii. 1914 (*Robinson*). Attenborough, ♂ ♀, 5 and 8. vi. 1915.

O. stercorarius De G. Radcliffe-on-Trent, 16. xii. 1912 (*Robinson*). Near Newbound Mill, Teversall, 25. v.; Crow Wood Hill, West Leake, 10. iv.; Roe Wood, Winkburn, 13. iv.—1915. Those from the two latter localities are a little doubtful.

O. sordidellus Zett. (?) Attenborough, 5. vi. 1915.

O. incoactus Walk. Nottingham, frequent, 6. vi. 1912, 7. iv.—2. v. 1915; Lambley Dumble, 12. iv. 1912; Crow Wood Hill, West Leake, 10. iv.; Roe Wood, Winkburn, 13. iv.; Ruddington, 15. v.; Attenborough, 5. vi.—1915 (*Carr*). Clifton and Clifton Grove, 17 and 21. iv.; Gamston near Nottingham, 28. iv.; Arnold, 10. vi.—1915 (*Robinson*).

O. oblidens Walk. Gamston near Nottingham, 25. iv. 1912 (*Robinson*). Lambley Dumble, 18. iv.; Thurgarton, 8. v.—1915.

O. opplens Walk. Clifton Grove, 17. iv.; Arnold, 10. vi.—1915 (*Robinson*). Thurgarton, 8. v.; Ruddington, both sexes, 15. v.—1915.

CAMPTOCLADIUS Wulp.

- C. aterrimus** Mg. Very common in early spring. Sherwood and Mapperley, Nottingham; Arnold; Gedling; Bulwell Forest; Clifton; Ruddington; Attenborough; East and West Leake; Bingham; Thurgarton; Roe Wood, Winkburn; etc. (*Carr*). Nuthall (*Robinson*).
- C. byssinus** Schrk. Bingham, 11. iv. 1912; Sherwood, Nottingham, 21. v. 1915.
- C. minimus** Mg. Sherwood, Nottingham, 12 to 21. v.; Lambley Dumble, 18 and 22. v.—1915.

TANYTARSUS Wulp.

- T. pusio** Mg. (?) East Leake, 2. vi. 1915.
- T. flavipes** Mg. Radcliffe-on-Trent, 25. v. 1912 (*Carr*), and 6. v. 1915 (*Robinson*). Attenborough, 5. vi. 1915.
- T. gmundensis** Egg. Nottingham, 3. vii. 1912 (*Robinson*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Lambley Dumble, 12. iv. 1912; Car Colston, 11. iv. 1912; Thurgarton, 8. v. 1915.
- T. flavellus** Zett. Bingham, 11. v. 1912; Ruddington, and Glapton near Clifton, common, 15. v. 1915.
- T. sp.** Lambley Dumble, 18. iv. 1915. (This is the *T. viridulus* L. of Verrall's coll. according to Mr. Edwards).

METRIOCNEMUS Wulp.

- M. fuscipes** Mg. Radcliffe-on-Trent, 16. xii. 1912 (*Robinson*). Sherwood, Nottingham, 11. iii. to 14. v. 1915.
- M. adjunctus** Walk. Sherwood, Nottingham, 28. iv.; Thurgarton, 8. v.—1915. (According to Edwards this may be only a variety of *fuscipes*).
- M. impensus** Walk. (*M. occidens* Verr. MS. of Verrall's coll. in Brit. Mus.). On window at 'Mapperley Edge,' Sherwood, Nottingham, 14. v. 1915.

DIAMESA Meig.

- D. obscurimana** Mg. Gamston near Nottingham, 25. iv. 1912; Papplewick, 1. vi. 1914 (*Robinson*). Nottingham, 29. iv. 1913; Lambley Dumble, 9. v.; Thurgarton, 8. v.; East Leake, 2. vi.; near Newbound Mill, Teversall, 25. v.—all 1915; Colston Bassett, 18. v. 1898.

D. waltlii Mg. Skegby, 25. v. 1915.

TANYPUS Meig.

T. varius Fab. Mapperley, Nottingham, May 1913 (*Thornley*).
Sneinton, Nottingham, May 1914; Oxtun, 26. iv. 1914
(*Saunt*). Thorney, Aug. 1913 (*L. A. Carr*).

T. nebulosus Mg. Radcliffe-on-Trent, 28. ix. 1911 (*Robinson*).
Sherwood Forest near Ollerton, July 1912; Thorney, Aug.
1913 (*L. A. Carr*). Sherwood, Nottingham, 1. vi.; East
Leake, 2. vi.—1915.

T. choreus Mg. Attenborough, 5. vi. 1915.

T. punctatus Fab. Radcliffe-on-Trent, 25. v. 1912.

T. punctipennis Mg. Sherwood Forest near Ollerton, July
1912 and June 1914 (*L. A. Carr*). Wilford, by the Trent,
6. vi. 1913; Attenborough, 5. vi. 1915.

T. carneus Fab. Sherwood, Nottingham, 25. iv. 1913 and
1 to 10. vi. 1915 (*Carr*). Nottingham, May and June
1914 (*Saunt*). Radcliffe-on-Trent, 6. v. 1915 (*Robinson*).
Attenborough, 5 and 8. vi. 1915.

T. ornatus Mg. Radcliffe-on-Trent, 27. v. 1912 (*Robinson*).
Attenborough, 5 and 8. vi. 1915.

T. trifascipennis Zett. Sherwood Forest near Ollerton, July
1912 and June 1914 (*L. A. Carr*).

T. culiciformis L. Sherwood Forest near Ollerton, July 1912
(*L. A. Carr*). Bassingfield near Gamston, 2. vii. 1914
(*Robinson*).

T. monilis L. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

T. phatta Egg. Nottingham, 16. vi. 1912.

T. melanops Mg. Aspley Woods near Nottingham, 28. v. 1912.

CERATOPOGON Meig.

C. varius Winn. South Leverton, 14. v. 1901 (*Thornley*).
Sherwood Forest, common, June 1914; Nottingham,
common, 14. v. to 10. vi. 1915, etc.; Glapton near Clifton,
15. v. 1915.

C. fascipennis Staeg. On windows, 'Mapperley Edge,'
Sherwood, Nottingham, 14. v. 1915.

- C. pulicaris** L. Lenton, 29. v. 1913 (*Robinson*). Common on windows and in garden at 'Mapperley Edge,' Nottingham, May 1915.
- C. nubeculosus** Mg. Attenborough, ditch near church, 5. vi. 1915.
- C. gracilis** Hal. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- C. flavipes** Mg. Marshy ground near Newbound Mill, Teversall, 26. vi. 1913.
- C. femoratus** Mg. Marshy ground near Newbound Mill, Teversall, 26. vi. 1913; Crow Wood Hill, West Leake, 14. vi. 1913 and 9. viii. 1914; East Leake, 2. vi. 1915; Attenborough, 5 and 8. vi. 1915.
- C. venustus** Mg. Cotgrave, 27. vi. 1912 (*Robinson*).
- C. ornatus** Mg. North Collingham, 25. viii. 1913.

ORPHNEPHILIDAE.

ORPHNEPHILA Hal.

- O. testacea** Ruthé. Lambley Dumble, 18. iv. 1915.

PSYCHODIDAE.

PERICOMA Hal.

- P. palustris** Mg. Lambley Dumble, ♀, 22. v. 1915.
- P. cognata** Etn. Lambley Dumble, ♂, 22. v. 1915.
- P. compta** Etn. Widmerpool, ♀, 25. ix. 1912; Lambley Dumble, ♂, 9. v. 1915 (*Carr*). Radcliffe-on-Trent, both sexes swept commonly from *Acer*, 25. ix. 1913 (*Robinson*).
- P. nubila** Mg. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). (?) Radcliffe-on-Trent, ♀, 25. v. 1912; Oxton Bogs, ♂, 24. iv. 1913, and several of both sexes, 14. vii. 1915; (?) Upton near Southwell, ♀, 30. vi. 1913; (?) Lambley Dumble, 22. v. 1915. (The specimens from Radcliffe, Upton and Lambley being ♀ ♀ there is some little doubt as to their specific identity, as they are almost indistinguishable from ♀ ♀ of the next species).
- P. trivialis** Etn. Sherwood Forest near Ollerton, ♀; Radcliffe-on-Trent, many ♀ ♀, 10. vii. 1912; Oxton Bogs, ♂, 24. iv. 1913, and ♂ ♂, 14. vii. 1915; Skegby, ♂, 25. v.; Thur-

- garton, ♀, 8. v.—1915 (*Carr*). Papplewick, ♂ ♀, 9. x.; Beeston, ♂ ♂, 24. iv.—1913 (*Robinson*).
- P. canescens** Mg. (*P. schineri* Etn. MS.). Papplewick, ♀, 9. x. 1913; Arnold, 10. vi. 1915 (*Robinson*). Lambley Dumble, 9. v.; Oxtou Bogs, ♀, 14. vii.—1915.
- P. gracilis** Etn. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- P. caliginosa** Etn. Aspley Woods near Nottingham, ♀, 27. vi. 1912; Gotham, ♀, 3. vii. 1915.
- P. auriculata** Curt. Radcliffe-on-Trent, ♂ ♂, 21. vi. 1913; Oxtou Bogs, ♂ ♂ ♀ ♀, 14. vii. 1915.

ULOMYIA Walk.

- U. fuliginosa** Mg. Marshy ground near Newbound Mill, Teversall, ♂ ♂, 3. viii. 1912 and 26. vi. 1913; Lambley Dumble, ♂ ♂, 22. v.; Oxtou Bogs, ♂ ♂ ♀ ♀, 14. vii.—1915.

PSYCHODA Latr.

- P. alternata** Say. (*P. serpunctata* Curt.). In my garden at Sherwood, Nottingham, 1 to 5. vi. 1915.
- P. albipennis** Zett. Sherwood Forest near Ollerton; Nottingham, very common on windows and fences, etc., April to June; Widmerpool, ♀, 25. ix. 1912. East Leake, 10. iv.; Thurgarton, 8. v.; Ruddington and Clifton, 15. v.; Newbound Mill, Teversall, 25. v.; Skegby, 25. v.—all 1915 (*Carr*). Nuthall, 15. iv. 1915 (*Robinson*).

CULICIDAE.

CORETHRA Meig.

- C. plumicornis** Fab. Sherwood Forest near Ollerton, July 1912.

ANOPHELES Meig.

- A. maculipennis** Mg. South Leverton, ♀ ♀ only, 10. ii. and 7. iv. 1898 and 10. iii. 1901 (*Thornley*).

OCHLEROTATUS Arrib.

- O. maculatus** Mg. Aspley Woods near Nottingham, 28. v., 27. vi., and 26. vii. 1912; Sherwood Forest near Ollerton, June 1914; near Park Drain station, Misson, 20. ix. 1914.

O. diversus Theob. Aspley Woods near Nottingham, 18 and 28. v. 1912.

O. nemorosus Mg. South Leverton, ♀ ♀, 12 and 26. i., and 10. ii. 1898 (*Thornley*).

THEOBALDIA Nev.-Lem.

T. annulatus Schrk. South Leverton, ♀ ♀, 26. i., 30. iii., and 4. v. 1898 (*Thornley*). Park Drain, Misson, common, 22. ix. 1914 (*Thornley* and *Carr*).

T. fumipennis Steph. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*).

CULEX L.

C. pipiens L. South Leverton, abundant; Mapperley, Nottingham, 11. iii. 1912 (*Thornley*). Sherwood Forest, common; Sherwood, Nottingham, ♀ ♀ abundant, March 25 to end of May 1915.

PTYCHOPTERIDAE.

PTYCHOPTERA Meig.

P. contaminata L. Worksop (*Houghton*). South Leverton; Kingston-upon-Soar, 29. vii. 1912 (*Thornley*). Arnold, 4. vi. 1914 (*Robinson*). Langford Moor, 25. v.; Flawford near Plumtree, 4. vi.—1913 (*Saunt*). By the Trent at Attenborough, 8. viii. 1911; Aspley Woods, 16. vii. 1912; Radcliffe-on-Trent, common, 29. v. 1912 and 21. vi. 1913; Attenborough, 6. vi. 1915.

P. paludosa Mg. South Leverton, ♀, June 1897 (*Thornley*). Arnold, several, 4. vi. 1914 (*Robinson*). Near Newbound Mill, Teversall, 25. v. 1915.

P. lacustris Mg. Radcliffe-on-Trent, 29. v. 1912; near Newbound Mill, Teversall, 25. v. 1915; Oxtou Bogs, 14. vii. 1915 (*Carr*). Arnold, 4. vi. 1914, and commonly 10. vi. 1915 (*Robinson*).

P. albimana Fab. South Leverton, ♂ ♀; Mapperley, Nottingham, May 1913 (*Thornley*). Arnold, 10. vi. 1915 (*Robinson*). Sherwood Forest, Ollerton, June 1914; Car Colston, 11. v. 1912; Thurgarton, 8. v.; Lambley, common, 22. v.; Glapton near Clifton, 15. v.; Attenborough, 6. vi.—1915.

P. scutellaris Mg. Radcliffe-on-Trent, 25. v.; Bulwell Forest, 8. viii.—1912. Attenborough, ditch near church, 6. vi. 1915.

LIMNOBIDAE.

LIMNOBIA Meig.

- L. quadrinotata** Mg. Treswell Wood, ♀, 27. vi. 1898 (*Thornley*).
- L. nubeculosa** Mg. South Leverton, ♀, (*Thornley*). Sherwood Forest near Ollerton and Edwinstowe, May and June, 1901-12-14 (*Becher, Carr*).
- L. flavipes** Fab. Aspley Woods, 18. v.; Radcliffe-on-Trent, 25. v.—1912; Crow Wood Hill, West Leake, 14. vi.; near Newbound Mill, Teversall, 26. vi.—1913; Sherwood Forest near Ollerton, June 1914.
- L. analis** Mg. Sherwood Forest, 6. vi. 1892 (*R. C. Bradley*). Bingham, May 1912 (*R. Pilling*). Bradmore, 13. v. 1913 (*Saunt*). Car Colston, 11. v. 1912.
- L. tripunctata** Fab. South Leverton, not uncommon, 2. vi. 1900 (*Thornley*). Sherwood Forest near Ollerton, common, June 1914 (*L. A. Carr*). Aspley Woods, 18. v. and 11. vi. 1912; by the river, Radcliffe-on-Trent, 25. v. 1912; Attenborough, 8. vi. 1915 (*Carr*). Nottingham, 19. vi. 1912 (*Robinson*). Langford Moor, 25. v. 1913 (*Saunt*).
- L. trivittata** Schum. Sherwood Forest near Ollerton, July 1912 and June 1914 (*L. A. Carr*).

DICRANOMYIA Steph.

- D. modesta** Mg. Thorney, Aug. 1913; Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Near Park Drain station, Misson, 22. ix. 1914 (*Thornley and Carr*). Arnold, 10. vi. 1915 (*Robinson*). Gotham, 3. vi. 1915.
- D. chorea** Mg. South Leverton, sometimes abundant, *e.g.* 24. v. 1899 (*Thornley*). Mapperley and Sherwood, Nottingham, abundant, 19. vii. 1912, 15. v., 11 to 16. vi. 1913, 3. vi. and in September 1914, and throughout May 1915 (*Thornley and Carr*). Lambley, 17. v.; Plumtree, 24. viii.—1913 (*Saunt*). Thurgarton, 8. v. 1915.
- D. didyma** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- D. dumetorum** Mg. Sherwood Forest near Ollerton, June and July 1912; Thorney, Aug. 1913 (*L. A. Carr*).
- D. morio** Fab. Oxton Bogs, 14. vii. 1915.

RHIPIDIA Meig.

- R. maculata** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Sherwood, Nottingham, May 1913 and 1 to 11. vi. 1915.

EMPEDA O.-Sack.

- E. nubila** Schum. Thorney, Aug. 1913; Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Sherwood, Nottingham, 22. v. and 1. vi. 1915.

GONIOMYIA Steph.

- G. tenella** Mg. East Leake, 2. vi. 1915.

MESOCYPHONA O.-Sack.

- M. sp.** Thurgarton, 8. v. 1915.

MOLOPHILUS Curt.

- M. bifilatus** Verr. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
M. obscurus Mg. Near Newbound Mill, Teversall, 26. vi. 1913; Sherwood Forest, June 1914; Thurgarton, not uncommon, 8. v. 1915; Oxtan Bogs, 14. vii. 1915.

RHYPHOLOPHUS Kolen.

- R. lineatus** Mg. South Leverton, May 1896; Lambley Dumble, 12. iv. 1912 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Radcliffe-on-Trent, 6. v. 1915 (*Robinson*).
R. nodulosus Mcq. South Leverton (*Thornley*). West Leake, 1. vi. 1915 (*Robinson*). Sherwood Forest near Edwinstowe, 12. vi. 1912; near Park Drain station, Misson, 22. ix. 1914; Thurgarton, 8. v.; Lambley, 22. v.; Sherwood, Nottingham, 1. vi.—1915.

ERIOPTERA Meig.

- E. taenionota** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Attenborough, 5 and 8. vi. 1915; Oxtan Bogs, 14. vii. 1915.
E. fuscipennis Mg. Attenborough, 8. vi. 1915.

E. trivialis Mg. Sherwood Forest near Edwinstowe, 8. vi. 1892 (*R. C. Bradley*), and near Ollerton, June 1914 (*L. A. Carr*).

E. sp. (*fuscata* Verr. MS.). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Lambley, 22. v. 1915.

SYMPLECTA Meig.

S. stictica Mg. Beeston, 24. iv. 1913 (*Robinson*).

LIPSOTHRIX Lw.

L. errans Walk. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

EPHELIA Schin.

E. marmorata Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Arnold, 4. vi. 1914 and 10. vi. 1915 (*Robinson*).

POECILOSTOLA Schin.

P. punctata Schrk. South Leverton, ♂, 7. v. 1898 (*Thornley*). Thurgarton, several specimens, 8. v. 1915.

P. pictipennis Mg. Nottingham, May 1913 (*Thornley*). Radcliffe-on-Trent, 29. v. 1912.

EPIPHRAGMA O.-Sack.

E. picta Fab. Sherwood Forest near Ollerton, July 1912 and June 1914 (*L. A. Carr*). Epperstone Park, 14. vi. 1914 (*Saunt*).

LIMNOPHILA Meq.

L. dispar Mg. Sherwood Forest near Edwinstowe, 12. vi. 1912.

L. lineola Mg. Annesley, 15. viii. 1914 (*Saunt*). Attenborough, 8. vi. 1915.

L. aperta Verr. Oxtun Bogs, 14. vii. 1915.

L. ferruginea Mg. Sherwood Forest, 5. vi. 1892 (*R. C. Bradley*). Bulwell Hall Park, 6. vii. 1912 (*Robinson*). Bulwell, 22. viii. 1914 (*Saunt*). Near Park Drain station, Misson, 22. ix. 1914; Attenborough, 6. vi. 1915; Oxtun Bogs, 14. vii. 1915.

L. lucorum Mg. Radcliffe-on-Trent (*Thornley*).

- L. nemoralis** Mg. Ollerton, July 1912; Attenborough, 8. vi. 1915 (*Carr*). Arnold, 10. vi. 1915 (*Robinson*).

TRICHOCERA Meig.

- T. annulata** Mg. Nottingham, 24. x. 1913 (*Robinson*).
- T. hiemalis** De G. South Leverton, abundant in winter (*Thornley*). Nottingham and surrounding district, abundant on fine winter days. Radcliffe-on-Trent, 16. xii. 1912; Cotgrave, 23. x. 1913 (*Robinson*).
- T. regelationis** L. Nottingham, common; Bulwell Forest, 18. ii.; Gedling, 17. ii.—1912 (*Carr*). Mapperley, Nottingham, 24. iii. 1913 (*Thornley*). Radcliffe-on-Trent, 16. xii. 1912; Burton Joyce, 3. iv. 1913 (*Robinson*).

DICRANOTA Zett.

- D. bimaculata** Schum. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

TRICYPHONA Zett. (*Amalopis* Hal.).

- T. immaculata** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Papplewick, 9. ix. 1913; Nuthall, 24. v.; Arnold, 10. vi.—1915 (*Robinson*). Attenborough, 8. vi. 1915.
- T. claripennis** Verr. Near Newbound Mill, Teversall, 25. v. 1915.

PEDICIA Latr.

- P. rivosa** L. Marshy ground near Newbound Mill, Teversall, 18. v. 1908 (*E. Wright*): seen in same locality, 3. viii. 1912 (*Carr*). The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 (*Thornley* and *Carr*).

LIOGMA O.-Sack.

- L. glabrata** Mg. Oxtou Bogs, two ♂♂, 14. vii. 1915.

TIPULIDAE.

PACHYRRHINA Meq.

- P. crocata** L. Sherwood Forest, common on furze, 2. vi. 1892 (*R. C. Bradley* and *C. J. Wainwright*, *F.M.M.*, Nov. 1892, p. 289). Worksop (*Lady Robinson*). Manton Wood near

Workshop, 14. vi. 1906 (*Thornley*). Bulwell and Bestwood Park, June and July 1913 (*F. Hind*).

P. imperialis Mg. Garden, Sherwood Rise, 11 and 12. v. and 4. vi. 1912 (*Carr*). Garden, Mapperley, Nottingham, 26. vii. 1914 and 1. vii. 1915 (*Thornley*).

P. histrio Fab. South Leverton, ♂ ♀, July 1898; Fledborough, 18. vii. 1901 (*Thornley*). Sherwood Forest near Ollerton, July 1912 and June 1914; Thorney, Aug. 1913 (*L. A. Carr*). Cotgrave, 27. vi. 1912; Nuthall, 25. vi. 1914 (*Robinson*). Sherwood, Nottingham, 18 and 24. vi. 1912 and 20. vi. 1913.

P. maculosa Mg. South Leverton, common, May and June 1896, etc.; Grove, 23. vi. 1900; North Leverton, 18. v. 1901 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Clipston near Plumtree, 8. vii. 1911; Langford Moor, 25. v. 1913 (*Saunt*). Watnall, 28. v. 1914 (*Robinson*). Nottingham, ♂ ♀, 16. vii. 1898, 27. v. 1912, 19. v. 1914, etc.; East Leake, 19—26. v. 1912, 7. vi. 1913; 2. vi. 1915, etc.; West Leake, 14. vi. 1913; Skegby, 25. v. 1915.

P. quadrifaria Mg. South Leverton, July 1898 and 19. vi. 1900 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). East Bridgford, 11. vi. 1914 (*Robinson*). Aspley Woods, 27. vi. 1912; Sherwood, Nottingham, 20. vii. 1914.

TIPULA L.

T. pagana Mg. Papplewick, 9. ix.; Cotgrave, 22. x.—1913 (*Robinson*).

T. confusa Wulp. Sherwood Forest near Ollerton, several specimens, June 1914 (*L. A. Carr*). Sherwood, Nottingham, 27. v. 1914 and 12. v. 1915.

T. rufina Mg. Sherwood Forest near Ollerton, a pair, June 1914 (*L. A. Carr*).

T. pabulina Mg. (?) South Leverton, very common on the windows and walls of the vicarage, October 1899: determined, with some doubt, by Mr. Meade (*Thornley*).

T. hortulana Mg. Sherwood Forest near Ollerton, two specimens, June 1914 (*L. A. Carr*).

T. variipennis Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Papplewick, 5. vi. 1913 and 1. vi. 1914

(*Robinson*). Bingham, 11. v.; East Leake, 26. v.—1912: common in the last-named locality, 2. vi. 1915.

T. scripta Mg. Sherwood Forest near Edwinstowe and Ollerton, 12. vi. 1912 (*Carr*). Thorney, ♂ ♀, Aug. 1913 (*L. A. Carr*). Langford Moor near Newark (bred), 27. v. 1912 (*Saunt*). Crow Wood Hill, West Leake, 14. vi. 1913.

T. lunata L. South Leverton, ♂, 1896 (*Thornley*). Sherwood Forest near Ollerton, several specimens, 17—27. vi. 1914 (*L. A. Carr*).

T. lateralis Mg. Radcliffe-on-Trent, by the river, ♂ ♀, 25. v. 1912 (*Thornley* and *Carr*); in same locality, 6. v. 1915; Papplewick, 28. iv. 1914 (*Robinson*). Attenborough, both sexes rather common, 5 and 8. vi. 1915.

T. vernalis Mg. North and South Leverton and Treswell Wood, common (*Thornley*). Sherwood Forest near Ollerton (*L. A. Carr*). Common everywhere around Nottingham. Dates range from May 11th to June 21st.

T. vittata Mg. South Leverton; Treswell Wood, 29. v. 1899 (*Thornley*). Papplewick, 28. iv. 1914 (*Robinson*). Thurgarton, ♂ ♀, 8. v.; near Newbound Mill, Teversall, 28. v.—1915.

T. maxima Poda. (*T. gigantea* Schrk.). South Leverton, not uncommon (*Thornley*). Worksop (*Lady Robinson*, *H. E. Hodding*). Winkburn, several specimens, 9. vi. 1906.

T. lutescens Fab. Trowell, 15. vi. 1913 (*Saunt*).

T. oleracea L. Everywhere abundant.

T. paludosa Mg. Nottingham, September 1910 (*Robinson*).

T. ochracea Mg. South Leverton and Treswell Wood, common; Thrumpton, 18. v. 1912; Mapperley, Nottingham, 14. vi. 1912 (*Thornley*). Sherwood Forest near Ollerton, July 1912 and June 1914, common (*L. A. Carr*). Clumber (*Lady Robinson*). Nottingham; Bulwell, 6. vii. 1912; Radcliffe-on-Trent, abundant, 25. v. 1912; West Leake, common; Gotham, 3. vii.; Attenborough, 5. vi.; Oxtun Bogs, 14. vii.—1915.

DICTENIDIA Brul.

D. bimaculata L. Sherwood Forest, June 1889 (*C. J. Wainwright*). South Leverton, one ♀, 23. vi. 1900 (*Thornley*). Bunny, a ♀, 27. vii. 1913 (*Saunt*).

XIPHURA Brul.

- X. nigricornis** Mg. Sherwood Forest, ♀, 6. vi. 1892 (*R. C. Bradley* in *E.M.M.*, Nov. 1892, recorded in error as *X. atrata*). Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).

CTENOPHORA Meig.

- C. pectinicornis** L. 'Sherwood Forest, *W. G. Blatch*' (specimen so labelled in Birmingham Museum). Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).

RHYPHIDAE.

RHYPHUS Latr.

- R. fenestralis** Scop. South Leverton, March and April 1898, etc. (*Thornley*). Stapleford (*Dawson*). Nottingham, common in all parts of the city, April and May: also taken in June and July.
- R. punctatus** Fab. South Leverton, in great numbers on the vicarage windows, 15. vii. 1901; Mapperley, Nottingham, May 1913 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Linby, 18. ix. 1912; Lambley Dumble, 3. x. 1912 (*Robinson*). Sherwood Forest near Edwinstowe, 12. vi. 1912; Attenborough, 14. viii. 1913.

BRACHYCERA.

STRATIOMYIDAE.

NEMOTELUS Geoffr.

- N. nigrinus** Fln. Saundby near Retford, ♂ ♀, 15. vi. 1901 (*E. Shaw*). Sherwood Rise, Nottingham, in garden, 25. vi. 1912.

OXYCERA Meig.

- O. pygmaea** Fln. Misterton, ♂, 7. vii. 1898 (*Thornley*).
- O. trilineata** Fab. Marshy ground near Newbound Mill, Teversall, 26. vi. 1913.

STRATIOMYS Geoffr.

- S. potamida** Mg. Skegby, 9. vii. 1910.

ODONTOMYIA Meig.

O. viridula Fab. Cottam, 12. vii. 1899.

SARGUS Fab.

S. bipunctatus Scop. Worksop (*Houghton*). Epperstone Park, 6. ix. 1914 (*Carr*). Mapperley, Nottingham, in garden, July 1915 (*Thornley*).

S. flavipes Mg. East Leake, 24. vii. 1912.

S. nubeculosus Zett. South Leverton, one ♂ and six ♀ ♀, June 1896; Treswell Wood, ♀, 14. vii. 1897; Kingston-upon-Soar, abundant on windows of potting shed at the Agricultural College, 17. vii. 1911 (*Thornley*).

S. cuprarius L. Treswell, ♂, 8. ix. 1897; Mapperley, Nottingham, May 1913 (*Thornley*). Worksop (*Houghton*). Aspley and Beauvale Woods, July 1912; East Leake, 30. vi. and 14. vii. 1912.

S. iridatus Scop. Aspley Woods, 11. vi.; East Leake, 19. vi.—1912 (*Carr*). Mapperley, Nottingham, 26. vii. 1914 and 5. v. 1915 (*Thornley*).

CHLOROMYIA Dunc.

C. formosa Scop. Common throughout the county: dates range from June 9th to Aug. 8th.

MICROCHRYSA Lw.

M. polita L. South Leverton, very common on leaves of shrubs; Kingston-upon-Soar; Mapperley, Nottingham (*Thornley*). Sherwood Forest near Ollerton; Sherwood Rise and Sherwood, Nottingham, common; Calverton; Crow Wood Hill, West Leake. Dates vary from April 7th to July 28th.

M. flavicornis Mg. South Leverton, May 1896 and Aug. 10, 1901; Mapperley, Nottingham, 7. vi. 1913, etc. (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*J. A. Carr*). Near Newbound Mill, Teversall, 26. vi.; the Dumbles, Kirkby-in-Ashfield, 28. vi.; Fiskerton, 25. vii.—1913.

BERIS Latr.

B. vallata Forst. South Leverton, ♀, July 1897; Mapperley, Nottingham, ♀, 26. vii. 1914 (*Thornley*). Cottam, 12. vii.

1899; Sherwood Forest near Ollerton, July 1912; near Newbound Mill, Teversall, 26. vi. 1913; Nottingham, 25. viii. 1912 and 17. vii. 1913; Bulwell Forest, 21. vii. 1913; Linby, 29. vii. 1914.

B. geniculata Curt. Bassingfield near Gamston, ♂, 2. vii. 1914 (*Robinson*). Garden at Mapperley, Nottingham, both sexes, 18—25. vii. 1914 (*Thornley*). Flawford near Plumtree, 9. viii. 1914 (*Saunt*).

B. fuscipes Mg. Treswell Wood, 27. vi. 1898, 29. v. 1899, and commonly 25. v. 1901; Kingston-upon-Soar, Aug. 1904 (*Thornley*). Aspley Woods near Nottingham, 28. v. 1912.

B. chalybeata Forst. Aspley Woods, rather common from 28. v. to 26. vii. 1912; common in my garden at Sherwood, Nottingham, in June; Crow Wood Hill, West Leake, 14. vi. 1913; Sherwood Forest near Ollerton, very common in June (*Carr*). Garden at Mapperley, Nottingham, 3. vi. 1912, etc. (*Thornley*). Papplewick, June 1913-14 (*Robinson*).

CHORISOPS Rond.

C. tibialis Mg. Garden at Mapperley, Nottingham, 5. viii. 1912 (*Thornley*).

LEPTIDAE.

XYLOPHAGUS Meig.

X. ater Fab. Sherwood Forest, one ♀, 7. vi. 1892 (*R. C. Bradley*). Edwalton, 9. v. 1912; Bulwell, 9. v. 1914 (*Saunt*).

LEPTIS Fab.

L. scolopacea L. South Leverton, June 1896, common on boles of trees in a willow holt; East Park Wood, Laxton, 15. vi. 1906 (*Thornley*). Budby, Sherwood Forest, 9. vii. 1903; Edwinstowe, 12. vi. 1912; Ollerton, June 1914; Annesley, 4. vii. 1903; Aspley Woods near Nottingham, 11. vi. 1912; Crow Wood Hill, West Leake, 2. vi. 1913; near Newbound Mill, Teversall, 26. vi. 1913; Attenborough, 5. vi. 1915 (*Carr*). Papplewick, 5. vi. 1913 and 1. vi. 1914 (*Robinson*). Trowell, 1. vii. 1913 (*J. Dawson*). Epperstone, 11. vi. 1911; East Leake, 7. vi. 1913 (*Saunt*).

L. tringaria L. Treswell Wood, ♀, 14. vii. 1897; South Leverton, one ♀ in vicarage garden, 7. vii. 1898; Roe Wood, Winkburn, 26. vii. 1915 (*Thornley*). Worksop (*Houghton*). Sherwood Forest near Ollerton, June 1914; Cuckney Hay

Wood, Nether Langwith, 19. viii. 1912 and 11. viii. 1914 ; Crow Wood Hill, West Leake, 24. vii. 1912 (*Carr*). Langford Moor, 5. vi. 1911 ; Stapleford, 24. v. 1914 (*Saunt*).

L. nigriventris Lw. Cotgrave, 27. vi. 1912 (*Robinson*). Crow Wood Hill, West Leake, 24. vii. 1912 ; near Newbound Mill, Teversall, 3. viii. 1912.

L. lineola Fab. Sherwood Forest near Edwinstowe, 1. vii. 1911, 30. viii. 1912, and 10. viii. 1914 ; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 and 11. viii. 1914 ; Bulwell Forest, 2. viii. 1912 (*Carr*). Mapperley, Nottingham, 19. viii. 1913 and 26. vii. 1914 ; Kingston-upon-Soar, July and August 1914 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Nuthall, 9. vii. 1914 (*Robinson*).

CHRY SOPILUS Meq.

C. cristatus Fab. Treswell Wood, common, July 1897-8 ; North Leverton, 4. vii. 1901 (*Thornley*). Epperstone, 22. vi. 1913 ; Langford Moor near Newark, 13. vii. 1913 (*Saunt*). Wollaton, 27. vi. 1903 ; Cinder-hill brickyard, 30. vi. 1903 ; Bulwell Forest, 29. vi. 1903 and 8. viii. 1912 ; Aspley Woods near Nottingham, common, 16. vii.—9. viii. 1912 ; Sherwood Forest near Edwinstowe, 12. vi. 1912, and near Ollerton, common, July 1912 and June 1914 ; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 ; near Newbound Mill, Teversall, common, 26. vi. 1913.

C. aureus Mg. Upton near Southwell, 30. vi. 1913.

SYMPHOROMYIA Frfld.

S. immaculata Fab. Arnold, seven ♂♂, one ♀, 17. vi. 1915 (*Robinson*).

SPANIA Meig.

S. nigra Mg. Papplewick, 1. vi. 1914 (*Robinson*).

TABANIDAE.

HAEMATOPOTA Meig.

H. pluvialis L. South Leverton and Treswell Wood, common (*Thornley*). Worksop (*Houghton*). Sherwood Forest near Ollerton ; Annesley, 4. vii. 1903 ; Aspley Woods near Nottingham, rather common, 9 and 26. vii. 1912 ; Bloomer Wood

and the Dumbles, Kirkby-in-Ashfield, common, 28. vi. 1913; Upton near Southwell, 30. vi. 1913; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915 (*Carr*). Beeston, 23. vi. 1910; Nuthall, 9. vii. 1914 (*Robinson*). Trowell (*Dawson*). Epperstone, 22. vi. 1913 (*Saunt*).

THERIOPLECTES Zell.

T. tropicus Mg., var. *trisinatus* Jaen. Sherwood Forest near Edwinstowe, 10 to 14. vi. 1912 (*L. A. Carr*).

T. distinguendus Verr. Sherwood Forest, 5. vii. 1886 (*Rev. W. Becher*). Clumber, 1902 (*Lady Robinson*).

TABANUS Zell.

T. bovinus L. Clumber, 1902 (*Lady Robinson*).

T. bromius L. South Leverton, ♀, July 1897; Treswell Wood, ♀, 14. vii. 1897; Roe Wood, Winkburn, ♀, 26. vii. 1915 (*Thornley*).

CHRYSOPS Meig.

C. caecutiens L. South Leverton and Treswell Wood, common (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Trowell, 15. vi. 1913 (*Saunt*). Cottam and Rampton near Retford, 12—18. vii. 1899; Langford Moor near Newark, 29. vi. 1899 and 16. viii. 1912.

CYRTIDAE.

ACROCERA Meig.

A. globulus Panz. Sherwood Forest (*Donisthorpe, teste Verrall*).

ONCODES Latr.

O. gibbosus L. Sherwood Forest (*Donisthorpe*).

BOMBYLIDAE.

BOMBYLIUS L.

B. major L. South Leverton, in vicarage garden, 28. iv. 1900; Treswell Wood, 6. v. 1899 (*Thornley*). Roe Wood, Winkburn, 8. iv. 1898 and 28. iv. 1901, rather common: taken in each case at primrose flowers.

THEREVIDAE.

THEREVA Latr.

- T. nobilitata** Fab. Sherwood Forest (*C. J. Wainwright*). Near Edwinstowe, 12. vi. 1912; East Leake, several specimens among bracken, 30. vi. 1912.

ASILIDAE.

ASILUS L.

- A. crabroniformis** L. Bulwell Forest, Nottingham, several specimens taken many years ago by the late W. Rigby: some of these are in the Natural History Museum, University College.

DYSMACHUS Lw.

- D. trigonus** Mg. Bulwell Forest, 8. vii. 1899 and 17. vi. 1900 (*Carr*). Langford Moor, 5. vi. 1911 (*Saunt*). Worksop (*Houghton*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

MACHIMUS Lw.

- M. atricapillus** Fall. Thorney, two specimens, 8. viii. 1899 (*Carr*). Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Robinson and Carr*). Clumber (*Lady Robinson*). Treswell Wood, a pair, 15. vii. 1901 (*Thornley*). Bulwell, 22. viii. 1914 (*Saunt*).

NEOITAMUS O.-Sack.

- N. cyanurus** Lw. Sherwood Forest, not uncommon, June 1889 (*C. J. Wainwright*). Clumber (*Lady Robinson*). Langford Moor near Newark, May to July (*Carr, Saunt, Thornley*).

LAPHRIA Meig.

- L. marginata** L. Treswell Wood, ♂ ♀, 10. vii., and several of both sexes, 14. vii.—1897 (*Thornley*). Epperstone Park, 9. vii. 1911, etc. (*Saunt*). Roe Wood, Winkburn, 26. vii. 1915.

DIOCTRIA Meig.

- D. atricapilla** Mg. Rampton, 18. vii. 1899 (*Thornley*). Langford Moor, 5. vi. 1911 (*Saunt*). Attenborough, 8. vi. 1915.

- D. oelandica** L. Sherwood Forest (*C. J. Wainwright*). Manton Woods near Worksop, not uncommon, June 1907 (*Thornley*). Langford Moor, 5. vi. 1911 (*Saunt*).
- D. rufipes** De G. Sherwood Forest, 1892 (*Wainwright*); Budby, 9. vii. 1903 (*J. W. Carr*); and near Ollerton. June 1914 (*L. A. Carr*). Worksop (*Lady Robinson, Houghton*). North and South Leverton, common in May and June; Treswell Wood, 4. vi. 1900; Rampton, 25. vi. 1901; Besthorpe, 13. vi. 1914 (*Thornley*). Stapleford (*Dawson*). Langford Moor, 5. vi. 1911 and 12. vii. 1913; Epperstone Park, 14. vi. 1914 (*Saunt*). Hoveringham, 20. vi. 1912; East Bridgford, 11. vi. 1914 (*Robinson*). Strelley, 12. vi. 1899; Bulwell Forest, 29. vi. 1903; Southwell, 10. vi. 1899; Widmerpool, 23. vi. 1900; Crow Wood Hill, West Leake, common, 2 to 17. vi. 1913-14.
- D. baumhaueri** Mg. Sherwood Forest, 5. vi. 1892 (*C. J. Wainwright* in *E.M.M.*, 1892, p. 313). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- D. linearis** Fab. Treswell Wood, several in July 1897; also 27. vi. and 15. vii. 1901; Roe Wood, Winkburn, 26. vii. 1915 (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*).

LEPTOGASTER Meig.

- L. cylindrica** De G. South Leverton, ♂ ♀, 9. vii. 1898, others on 26. vi. 1899; Cottam, not uncommon by sweeping grass, 12. vii. 1899; Rampton, 28. vi. 1901; Langford Moor, 29. vi. 1899; Kingston-upon-Soar, Aug. 1901 and 1912; Gotham, 9. viii. 1912 (*Thornley*). Sherwood Forest near Edwinstowe, 10 to 14. vi. 1912 (*L. A. Carr*). East Leake, 11. vii. 1914 (*Saunt*). Crow Wood Hill, West Leake, 14. vi. 1913 and 14. vi. 1914 (*Carr*). Nuthall, 1. vii. 1915 (*Robinson*).
- L. guttiventris** Zett. Sherwood Forest near Edwinstowe, 10 to 14. vi. 1912 (*L. A. Carr*).

EMPIDIDAE.

HYBOS Meig.

- H. culiciformis** Fab. Kingston-upon-Soar and West Leake Hills, July 1914 (*Thornley*). Nuthall, 9. vii. 1914 (*Robinson*). Thorney, Aug. 1913 (*L. A. Carr*). Owthorpe, 28. viii. 1914 (*Saunt*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913.

- H. femoratus** Müll. Aspley Woods near Nottingham, 16. vii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Langford Moor, 14. viii. 1914; Sherwood Forest near Edwinstowe and Ollerton, June and Aug. 1914.

CYRTOMA Meig.

- C. spuria** Fall. Treswell Wood, ♀, 27. vi. 1898 (*Thornley*). Sherwood Forest near Ollerton, 17 to 27. vi. 1914 (*L. A. Carr*). Aspley Woods, 11. vi. 1912.
- C. sulcata** Zett. Sherwood Forest near Ollerton, 17—27. vi. 1914 (*L. A. Carr*). Hoveringham, 22. vi. 1912 (*Robinson*). Aspley Woods, 18. v. and 11. vi. 1912.

RHAMPHOMYIA Meig.

- R. nigripes** Fab. Sherwood Forest near Ollerton, common, 17—27. vi. 1914 (*L. A. Carr*). Worksop (*Hodding*). East Bridgford, 11. vi. 1914 (*Robinson*).
- R. sulcata** Fln. South Leverton and elsewhere in the Retford district, May 1896 (*Thornley*). Worksop (*Hodding*). Arnold, 14. v. and 14. vi. 1914 (*Robinson*). Bagthorpe, Nottingham, 5. vi. 1900; Aspley Woods, 18. v. 1912; Mapperley Plains and Gedling, 22. v.; near Newbound Mill, Teversall, 25. v.; East Leake, 2. vi.—1915.
- R. dentipes** Zett. Treswell Wood, 15. vi. 1901 (*Thornley*).
- R. geniculata** Mg. Garden at Mapperley, Nottingham, June 1912 (*Thornley*).
- R. variabilis** Fln. Sherwood Forest near Edwinstowe, 30. viii. 1912.
- R. flava** Fln. South Leverton, ♀, July 1897 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, 24. vii. 1912 and 14. vi. 1913.
- R. erythrophthalma** Mg. Sherwood Forest near Edwinstowe, 30. viii. 1912.
- R. longipes** Mg. Sherwood Forest near Ollerton, July 1912 and June 1914 (*L. A. Carr*). Aspley Woods, 27. vi. and 4. vii. 1912; West Leake, 23. vi. 1912; Crow Wood Hill, West Leake, 2 and 14. vi. 1913; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915.
- R. nigripennis** Fab. By the stream in 'The Parks' at Southwell, 6. vi. 1912; marshy ground near Newbound Mill, Teversall, 26. vi. 1913.

EMPIS L.

- E. tessellata** Fab. Common throughout the county. Mr. Thornley took one at North Leverton, 27. v. 1901, with a ♂ *Bibio marci* in its claws.
- E. livida** L. Common throughout the county. Mr. Thornley and I, on 10. vii. 1899 in Treswell Wood, saw numerous specimens capturing and carrying off individuals of a small pale *Tortrix*!
- E. opaca** Fab. South Leverton; Mapperley, Nottingham, 24. v. 1915 (*Thornley*). Sherwood Forest, Edwinstowe and Ollerton (*L. A. Carr*). Mansfield, 1. vi.; Linby, 31. v.; Bradmore, 13 and 16. v.—1913 (*Saunt*). Arnold, 18. v. 1912 and 4. vi. 1914; Papplewick, 1. vi. 1914 (*Robinson*). Clifton, 24. v. 1900; Bingham, 11. v.; Radcliffe-on-Trent, ♂ ♂ ♀ ♀, 25. v.; East Leake, 26. v.—1912; Mapperley Plains and Gedling, 22. v. 1915.
- E. stercorea** L. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Aspley Woods, 18. v., 27. vi., 4. vii. 1912; Radcliffe-on-Trent, 25. v. 1912; Cuckney Hay Wood, 19. vi. 1915.
- E. trigramma** Mg. Common: records numerous, and from all parts of the county.
- E. punctata** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Wilford, 19. v. 1914; near Newbound Mill, Teversall, 25. v.; Cuckney Hay Wood, Nether Langwith, 19. vi.; Attenborough, 8. vi.—1915 (*Carr*). Arnold, 10 and 17. vi. 1915 (*Robinson*).
- E. scutellata** Curt. Aspley Woods near Nottingham, 18. v. 1912; Gedling, 12. vi. 1913; Lambley, 22. v.; East Leake, 2. vi.; Gotham, 3. vii.—1915.
- E. pennipes** L. Treswell Wood, one ♂ and four ♀ ♀, 27. vi. 1898: very common in same locality, 1. vi. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi. 1912.
- E. pennaria** Fln. Treswell Wood, 16. v. 1901 (*Thornley*). Sherwood Forest, common in July 1912 and June 1914; Sherwood Rise, Nottingham, and Aspley Woods, 18. v. 1912 (*Carr*). Tollerton, 28. v. 1913 (*Robinson*).
- E. vernalis** Mg. Treswell Wood, ♂, 16. v. 1901; Mapperley, Nottingham, 21. vi. 1912, 17. v. 1914, etc. (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Aspley Woods, 18. v. 1912.

- E. albinervis** Mg. Sherwood Forest near Ollerton, July 1912 and June 1914 (*L. A. Carr*). Radcliffe-on-Trent, 10. viii.; Crow Wood Hill, West Leake, 24. vii.—1912; Upton near Southwell, 30. vi. 1913.
- E. vitripennis** Mg. Sherwood Forest near Edwinstowe, 30. viii. 1912.
- E. caudatula** Lw. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Papplewick, 5. vi. 1913 (*Robinson*). West Leake (Crow Wood Hill, etc.), 23. vi. 1912 and 2. vi. 1913; East Leake, 19. v. 1912, 25. v. 1913 and 2. vi. 1915; Southwell, 6. vi. 1912; near Newbound Mill, Teversall, 26. vi. 1913.
- E. chioptera** Flin. South Leverton, not uncommon on the vicarage windows; North Leverton, 24. v. 1901; Mapperley, Nottingham, May 1913 (*Thornley*). Sherwood Forest near Ollerton, June 1914; Sherwood, Nottingham, 24. v. and 1. vi. 1913 and 14. v. 1914; Lambley, 22. v.; near Newbound Mill, 25. v.; Attenborough, 5. vi.—1915.
- E. aestiva** Lw. Crow Wood Hill, West Leake, 24. vii. 1912; near Newbound Mill, Teversall, 26. vi. 1913; Sherwood Forest near Ollerton, June 1914; Oxtou Bogs, 14. vii. 1915.
- E. grisea** Flin. Treswell Wood, 27. vi. 1901 (*Thornley*). Nottingham, 19. vi. 1913; Aspley Woods, 4. vii. 1912; Bulwell Hall Park, 8. vii. 1912; Radcliffe-on-Trent, by the river, 25. v. 1912.
- E. fuscisquama** Verr. MS. Sherwood Forest near Edwinstowe, ♀, 12. vi. 1912, and near Ollerton, ♂, June 1914 (*J. W.* and *L. A. Carr*).

PACHYMERIA Steph.

- P. femorata** Fab. South Leverton, ♀, May 1896 (*Thornley*). Bradmore, 16. v. 1914 (*Saunt*). By the river, Radcliffe-on-Trent, 25 and 29. v.; Car Colston, 11. v.—1912; Crow Wood Hill, West Leake, rather common, 27. v. 1913.

HILARA Meig.

- H. cilipes** Mg. Bingham, 11. v. 1912.
- H. pilosa** Zett. Treswell Wood, 29. v. 1899 and 4. vi. 1900 (*Thornley*).
- H. maura** Fab. Very common: often flying in swarms over water: my dates are May 11th to June 19th. South

- Leverton (*Thornley*). Arnold; Papplewick; Tollerton (*Robinson*). Sherwood Forest near Ollerton; near Newbound Mill, Teversall; Skegby; Nether Langwith; Nottingham; Attenborough; Gedling; Ruddington; Lambley; Radcliffe-on-Trent; Bingham; Hoveringham; East Leake; etc.
- H. niveipennis** Zett. Mapperley, Nottingham, in garden, 16. v. and in June, 1913 (*Thornley*).
- H. clypeata** Mg. East Leake, 19. v. 1912.
- H. quadrivittata** Mg. Sherwood Forest near Ollerton, 22. vii. 1912; near Newbound Mill, Teversall, 26. vi. 1913; Radcliffe-on-Trent, 29. v. 1912; Attenborough, 5. vi.; Oxtun Bogs, 14. vii.—1915 (*Carr*). Arnold, 17. vi. 1915 (*Robinson*).
- H. cornicula** Lw. South Leverton, May 1901 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- H. litorea** Fln. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- H. chorica** Fln. Radcliffe-on-Trent, by the river, 25. v. 1912; Bulwell Forest, 21. vii. 1913.
- H. bivittata** Strobl. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Hoveringham, 22. vi. 1912 (*Robinson*). Nottingham, 10. vi. 1913; Gedling, 12. vi. 1913; East Leake, common, 19. v. 1912; Crow Wood Hill, etc., West Leake, 23. vi. 1912 and 2 to 14. vi. 1913.
- H. brunnea** Verr. MS. Sherwood Forest near Edwinstowe, 12. vi. 1912.
- H. primula** Collin MS. East Leake, 19. v. 1912.
- H. flavipes** Mg. (*Oreogeton flavipes* of Verrall's *List*). Sherwood Forest near Ollerton, July 1912, and near Edwinstowe, 30. viii. 1912.

OEDALEA Meig.

- Oe. stigmatella** Zett. Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*).
- Oe. holmgreni** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Arnold, 17. vi. 1915 (*Robinson*).

OCYDROMIA Meig.

- O. glabricula** Fln. South Leverton, in vicarage garden; Mapperley, Nottingham, 29. v. and 2. vii. 1915 (*Thornley*).

Sherwood Forest near Edwinstowe, June 1912, and commonly near Ollerton, June 17—27, 1914; Thorney, Aug. 1913 (*L. A. Carr*). Nuthall, 25. vi. 1914; Cotgrave, 23. x. 1913; Arnold, 23. v.; West Leake, 1. vi.—1915 (*Robinson*). Langford Moor near Newark, 14. viii. 1914; Sherwood, Nottingham, 8. vii.; Oxtun Bogs, 14. vii.; Roe Wood, Winkburn, 26. vii.; near Newbound Mill, Teversall, 25. v.—all 1915.

CLINOCERA Meig.

- C. (*Heleodromia* Hal.) *stagnalis* Hal.** Beeston, 24. iv. 1913 (*Robinson*).
C. (*Wiedemannia* Zett.) *bistigma* Curt. Sherwood, Nottingham, 2. v. 1913.

HEMERODROMIA Meig.

- H. *precatoria* Fln.** Bulwell Forest, 21. vii. 1913 (*Carr*). Lambley Dumble, 3. x. 1912; Papplewick, 9. x. 1913 (*Robinson*).

ARDOPTERA Mcq.

- A. *irrorata* Fln.** Attenborough, 8. vi.; Cuckney Hay Wood, Nether Langwith, 19. vi.—1915.
A. *guttata* Hal. Sherwood Forest near Ollerton, 17—27. vi. 1914 (*L. A. Carr*). Oxtun Bogs, 14. vii. 1915.

DRAPETIS Meig.

- D. *nervosa* Lw.** Lambley Dumble, 18. iv. 1915.
D. *aterrima* Hal. Sherwood Forest, Edwinstowe, 10. viii. 1914.

TACHYPEZA Meig.

- T. *nubila* Mg.** Treswell Wood, 16. v. 1901; South Leverton (*Thornley*). Sherwood Forest near Ollerton, several specimens, 17—27. vi. 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, 8. ix. 1914; Oxtun Bogs, 14. vii. 1915.

TACHISTA Lw.

- T. *arrogans* L.** Cinder-hill, 20. vi. 1912; Nottingham, 20. vi. and 3. vii. 1915 (*Robinson*). Attenborough, rather common, running on stonework of bridge over stream, 8. vi. 1915.

ELAPHROPEZA Mcq.

- E. ephippiata** Fln. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

TACHYDROMIA Meig.

- T. glabra** Mg. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).
- T. nigratarsis** Fln. Radcliffe-on-Trent, 25. v. 1912.
- T. longicornis** Mg. Sherwood Forest near Ollerton, common,
17—27. vi. 1914 (*L. A. Carr*).
- T. pallipes** Fln. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).
- T. minuta** Mg. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*). Mapperley, Nottingham, 19. vii. 1913
(*Thornley*). Bassingfield near Gamston, 2. vii. 1914 (*Robinson*).
Sherwood, Nottingham, 10. vi. 1913; Aspley Woods,
4. vii.; East Leake, 19. v.; West Leake, 23. vi.; Radcliffe-
on-Trent, 25. v.—all 1912; near Newbound Mill, Teversall,
3. viii. 1912 and 26. vi. 1913; Upton near Southwell,
30. vi. 1913.
- T. agilis** Mg. South Leverton, 24. v. 1899 (*Thornley*). Sher-
wood Forest near Edwinstowe and Ollerton, June 1912-14
(*L. A. Carr*). East Bridgford, 11. vi. 1914 (*Robinson*).
Nottingham, 18. v.; Aspley Woods, 18. v.; East Leake,
19. v.—1912; Crow Wood Hill, West Leake, 27. v. 1913
and 17. v. 1914; Gedling, 12. vi. 1913.
- T. notata** Mg. Near Newbound Mill, Teversall, ♂, 26. vi.
1913: 'a dark-legged variety' (*Collin*).
- T. subnotata** Collin MS. Near Park Drain station, Misson,
on *Salix*, 22. ix. 1914.
- T. annulata** Fln. Mapperley, Nottingham, 19. vii. 1913
(*Thornley*). Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).
- T. cursitans** Fab. Sherwood Forest near Edwinstowe, 12.
vi. 1912 (*Carr*). Kingston-upon-Soar, ♀, 6. viii. 1914
(*Thornley*).
- T. pallidiventris** Mg. Sherwood and Mapperley, Nottingham,
17—19. vii. 1913 (*Carr* and *Thornley*). Thorney, Aug. 1913
(*L. A. Carr*). Bulwell Hall Park, 8. vii. 1912; near
Newbound Mill, Teversall, 3. viii. 1912 and 26. vi. 1913;
East Leake, 11. viii. 1912; Upton near Southwell, 30. vi.
1913.

- T. flavicornis** Mg. Nottingham, 30. vi. 1912 (*Carr*). Stapleford, 13. viii. 1914 (*Robinson*).
- T. annulipes** Mg. Nottingham, 8. vi. 1912 (*Carr*). Sherwood Forest near Ollerton, a variety, June 1914 (*L. A. Carr*). Carlton near Nottingham, 8. vii. 1915 (*Robinson*).
- T. coarctata** Collin MS. Near Newbound Mill, Teversall, 3. viii. 1912 and 26. vi. 1913.
- T. interstincta** Collin MS. Bagthorpe, Nottingham, 18. vii. 1912.
- T. verralli** Collin MS. The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

DOLICHOPODIDAE.

PSILOPUS Meig.

- P. platypterus** Fab. Sherwood Forest near Ollerton, July 1912 and June 1914; Thorney, Aug. 1913 (*L. A. Carr*). Sherwood, Nottingham, 19. vi. 1913; Oxtan Bogs, 14. vii. 1915.
- P. wiedemanni** Fln. Oxtan Bogs, 14. vii. 1915.
- P. longulus** Fln. Two ♀ ♀ from Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*) are doubtfully referred to this species by Mr. C. G. Lamb.
- P. contristans** Wied. Cuckney Hay Wood, Nether Langwith, ♂ ♂ ♀ ♀, 19. vi. 1915.

DOLICHOPUS Latr.

- D. atratus** Mg. Oxtan Bogs, ♂ ♀, 14. vii. 1915.
- D. picipes** Mg. Oxtan Bogs, 14. vii. 1915.
- D. claviger** Stan. Sherwood Forest near Ollerton, ♂ ♂ ♀, June 1914 (*L. A. Carr*).
- D. plumipes** Scop. The Dumbles, Kirkby-in-Ashfield, ♂ ♀, 28. vi. 1913 (*Carr* and *Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Attenborough, common, 5 and 8. vi. 1915.
- D. wahlbergi** Zett. Warsop, ♂ ♂, 14. vii. 1913; also a doubtful ♀ from Thorney, Aug. 1913.
- D. pennatus** Mg. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). Attenborough, common, 5 and 8. vi.; Oxtan Bogs, 14. vii.—1915.

- D. popularis** Wied. Oxton Bogs, ♂ ♂ ♀ ♀, 14. vii. 1915.
- D. linearis** Mg. A doubtful ♀ from Owthorpe, 28. viii. 1914 (*Saunt*).
- D. griseipennis** Stan. Treswell Wood, ♂, 27. vi. 1898; Mapperley, Nottingham, in garden, ♀ ♀, 26. vi. and 2. vii. 1915 (*Thornley*). Crow Wood Hill, West Leake, 14. vi. 1913; Gotham, ♂, 3. vii.; Sherwood, Nottingham, ♀, 11. vii.—1915 (*Carr*). Cotgrave, ♀, 1. viii. 1914 (*Saunt*).
- D. simplex** Mg. Attenborough, ♀, 5. vi. 1915.
- D. festivus** Hal. A ♀, probably of this species, from Crow Wood Hill, West Leake, 14. vi. 1913; Gotham, ♂, 3. vii. 1915 (*Carr*). Rempstone, ♂, 15. vii. 1915 (*Thornley*).
- D. trivialis** Hal. South Leverton, 9. vii. 1898 and 28. vi. 1901; Treswell Wood, 27. vi. 1898, 15. vi. and 5. viii. 1901; Rempstone, ♂, 15. vii. 1915 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Near Newbound Mill, Teversall, 26. vi.; Warsop, 14. vii.; the Dumbles, Kirkby-in-Ashfield, 28. vi.; Upton near Southwell, ♂ ♀, 30. vi.; Crow Wood Hill, West Leake, 14. vi.—all 1913; Nottingham, ♂ ♂, 18. vi. 1912, 12. vi. 1915, etc.; Aspley Woods, 26. vii. 1912 (*Carr*). Edwalton, 9. v. 1912 (*Saunt*). Bulwell, 6. vii. 1911; Nuthall, 9. vii. 1914; Arnold, ♂ ♂, 17. vi. 1915 (*Robinson*).
- D. brevipennis** Mg. Gedling, 12. vi. 1913; Attenborough, ♂ ♂, 5 and 8. vi.; Gotham, 3. vii.—1915 (*Carr*). Ratcliffe-upon-Soar, 10. vi. 1911 (*Saunt*). Bassingfield near Gamston, ♂ ♀, 2. vii. 1914 (*Robinson*).
- D. unguatus** L. Common and generally distributed in the county, and taken from May 29th to end of August.

POECILOBOTHRUS Mik.

- P. nobilitatus** L. Rampton, ♂, 28. vi. 1901; Kingston-upon-Soar, 26. vii. 1905 (*Thornley*). Gotham, rather common, 3. vii. 1915.

HERCOSTOMUS Lw.

- H. chaerophylli** Mg. Sherwood Forest near Edwinstowe, 1. vii. 1911; Bulwell Forest, 21. vii. 1913 (*Carr*). Arnold, abundant, 17. vi. 1915 (*Robinson*).
- H. parvilamellatus** Mcq. Sherwood Forest near Ollerton, both sexes, 17—27. vi. 1914 (*L. A. Carr*).

HYPOPHYLLUS Lw.

H. crinipes Staeg. Nether Langwith, ♂, 19. vi. 1915.

GYMNOPTERNUS Lw.

G. cupreus Fln. Sherwood Forest near Ollerton, ♂ ♂ ♀ ♀, 17—27. vi. 1914 (*L. A. Carr*). Cuckney Hay Wood, Nether Langwith, ♂, 19. vi. 1915.

G. chalybeus Wied. Bulwell Forest, ♂, 8. viii. 1912.

CHRYBOTUS Meig.

C. neglectus Wied. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).

C. cilipes Mg. Oxton Bogs, 14. vii. 1915.

C. cupreus Mcq. Sherwood Forest near Ollerton, ♂ ♂, 17—27. vi. 1914 (*L. A. Carr*).

C. gramineus Fln. Treswell Wood, 27. vi. 1898 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912.

ARGYRA Mcq.

A. diaphana Fab. South Leverton, one ♂ in vicarage garden, 26. v. 1900 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Aspley Woods, 11. vi. 1912; Radcliffe-on-Trent, 26. v. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; East Leake, 2. vi.; Attenborough, 5. vi.; Oxton Bogs, 14. vii.; Thurgarton, ♂ ♂, 24. viii.—1915.

A. argentina Mg. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). Daybrook, Nottingham, 16. viii. 1915.

A. argyria Mg. Treswell Wood, 15. vi. 1901 (*Thornley*).

A. leucocephala Mg. Aspley Woods, 27. vi. 1912 (?); Gotham, 3. vii.; Daybrook, Nottingham, 16. viii.—1915 (*Carr*). Mapperley, Nottingham, 2. vi. 1915 (*Thornley*).

PORPHYROPS Meig.

P. spinicoxa Lw. Gedling, 12. vi. 1913; Thurgarton, common, 24. viii. 1915 (*Carr*). Worksop, ♂ (*Hodding*). Mapperley, Nottingham, in garden, ♂, 2. vi. 1915 (*Thornley*).

- P. crassipes** Mg. Sherwood Forest near Edwinstowe, ♂, 12. vi.; Aspley Woods near Nottingham, 28. v.; Radcliffe-on-Trent, a ♀ probably of this species, 29. v.—all 1912.

SYNTORMON Lw.

- S. tarsatus** Fln. Oxtou Bogs, ♂, 14. vii. 1915.

XIPHANDRIUM Lw.

- X. caliginosum** Mg. Near Newbound Mill, Teversall, ♂ ♂, 25. v. 1915; Daybrook, Nottingham, 16. viii. 1915.
- X. appendiculatum** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

SYSTEMUS Lw.

- S. bipartitus** Lw. A ♀, which Mr. Lamb thinks belongs to this very rare species, was taken by L. A. Carr in Sherwood Forest near Ollerton, between the 17th and 27th June 1914.

MEDETERUS Fisch.

- M. flavipes** Mg. Garden, Sherwood Rise, Nottingham, 15. viii. 1912.
- M. truncorum** Mg. Garden, Sherwood Rise, Nottingham, 12. viii. 1912; Sherwood, Nottingham, rather common in garden, 1—8. vii. 1915.
- M. dendrobaenus** Kow. Upton near Southwell, 12. vii. 1913.

SCELLUS Lw.

- S. notatus** Fab. Treswell Wood, ♀, 21. vii. 1897; South Leverton, ♀, July 1898 (*Thornley*). Thorney, 15 to 19. viii. 1913 (*L. A. Carr*).

CAMPSICNEMUS Walk.

- C. curvipes** Fln. Gedling, ♂, 12. vi. 1913; Radcliffe-on-Trent, ♂, 21. vi. 1913; Sherwood Forest near Ollerton, ♂, June 1914; Gotham, 3. vii. 1915.
- C. loripes** Hal. Gotham, 3. vii. 1915.

SYMPYCNUM Lw.

- S. aeneicoxa** Mg. Oxtou Bogs, ♂, 14. vii. 1915.

XANTHOCHLORUS Lw.

- X. ornatus** Hal. Sherwood Forest near Ollerton, 17 to 27. vi. 1914 (*L. A. Carr*).

*LONCHOPTERIDAE.***LONCHOPTERA** Meig.

- L. punctum** Mg. Near Park Drain station, Misson, 22. ix. 1914.
L. lacustris Mg. South Leverton, ♀, 7. v. 1898 (*Thornley*).

CYCLORRHAPHA.*PLATYPEZIDAE.***OPETIA** Meig.

- O. nigra** Mg. Aspley Woods, 18. v. 1912.

PLATYCNEMA Zett.

- P. pulicaria** Fln. Marshy place near Newbound Mill, Teversall, 26. vi. 1913.

CALLIMYIA Meig.

- C. amoena** Mg. Sherwood Forest near Edwinstowe, ♂, 30. viii. 1912 (*Robinson*). Crow Wood Hill, West Leake, two ♀ ♀ flying in wood, 9. viii. 1914 (*C. Morley and Carr*).

PLATYPEZA Meig.

- P. modesta** Zett. Sherwood Forest near Edwinstowe, one ♂, June 1912 (*L. A. Carr*).

*PIPUNCULIDAE.***CHALARUS** Walk.

- C. spurius** Fln. Beauvale Woods, Greasley, 12. vii. 1912; Sherwood, Nottingham, in my garden, 3. v. 1914; Crow Wood Hill, West Leake, 9. viii. 1914; Thurgarton, 8. v.; Mapperley Plains, Nottingham, abundant, 22. v.; near Newbound Mill, Teversall, 25. v.; Cuckney Hay Wood, Nether Langwith, 19. vi.—all 1915 (*Carr*). Mapperley, in garden, several during June 1915; common at Kingston-upon-Soar in August 1915 (*Thornley*).

VERRALLIA Mik.

V. pilosa Zett. Aspley Woods, 18. v. 1912.

V. aucta Fln. Sherwood Forest near Ollerton, 17 to 27. vi. 1914 (*L. A. Carr*). Beauvale Woods, Greasley, 12. vii. 1912; in garden, Sherwood, Nottingham, 16. vii. 1913; Oxtan Bogs, ♂ ♀, 14. vii.; Gotham, ♀, 3. vii.; Roe Wood, Winkburn, ♀, 26. vii.—1915.

PIPUNCULUS Latr.

P. zonatus Zett. Treswell Wood, one ♂ (*Thornley*).

P. fuscipes Zett. Arnold, 10. vi. 1915 (*Robinson*). Mapperley, Nottingham, 11. vi. 1915 (*Thornley*). Cuckney Hay Wood, Nether Langwith, ♀, 19. vi. 1915.

P. campestris Latr. South Leverton; Treswell Wood, 29. v. and 10. vii. 1899; Mapperley, Nottingham, ♀, 25. v. 1915 (*Thornley*). Aspley Woods near Nottingham, 11. vi. 1912; West Leake, 23. vi. 1912; near Newbound Mill, Teversall, 25. v.; Cuckney Hay Wood, 19. vi.; Gotham, ♂, 3. vii.—1915.

P. pratorum Fln. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*). Kingston-upon-Soar, ♀, 3. viii. 1915 (*Thornley*). Oxtan Bogs, ♂ ♀, 14. vii. 1915.

P. vittipes Zett. Aspley Woods near Nottingham, 11. vi. 1912.

P. confusus Verr. Near Newbound Mill, Teversall, 26. vi. 1913; Crow Wood Hill, West Leake, 17. v. 1914.

P. sylvaticus Mg. Mapperley, Nottingham, 16. vii. 1913 (*Thornley*). Cuckney Hay Wood, Nether Langwith, 19. vi. 1915; Gotham, 3. vii. 1915.

SYRPHIDAE.

PIPIZELLA Rond.

P. virens Fab. One example from Notts., locality label lost (*Thornley*, 1898).

P. heringi Zett. Treswell Wood, 9. vi. 1900, confirmed by Verrall (*Thornley*).

PIPIZA Fln.

P. luteitarsis Zett. South Leverton, 25. v. 1900, one specimen in vicarage garden, confirmed by Verrall (*Thornley*).

- P. noctiluca** L. South Leverton, common, May 1897, etc.; Treswell Wood, 10. vii. 1897, 9. vi. 1900, etc. (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Epperstone, 9. vi. 1911 (*Saunt*). Common in gardens at Sherwood and Mapperley, Nottingham, in May and June (*Thornley* and *Carr*). Aspley Woods, June; East Leake, June; Radcliffe-on-Trent, 29. v.—1912.
- P. fenestrata** Mg. Sherwood Forest near Edwinstowe, 5. vi. 1892 (*R. C. Bradley*). Epperstone Park, 19. v. 1901 (*Carr*), and 17. v. 1914 (*Saunt*).
- P. lugubris** Fab. Treswell Wood, one ♀, 30. vii. 1897 (*Thornley*). Wigsley, 7. viii. 1899.

CNEMODON Egg.

- C. vitripennis** Mg. Worksop (*Houghton*). Sherwood Forest near Ollerton, ♂ ♀, June 1914 (*L. A. Carr*). South Leverton, ♂, May 1897; Mapperley, Nottingham, in garden, 31. v. 1914, and several in 1915 (*Thornley*). In garden, Sherwood, Nottingham, 11. v. 1913.

LIOGASTER Rond.

- L. metallina** Fab. South Leverton, ♀, June 1896: ♂, 14. v. 1901; Treswell Wood, 15. vi. 1901 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Bulwell, 22. viii. 1914 (*Saunt*). Radcliffe-on-Trent, 29. v. 1912.

CHRYSOGASTER Meig.

- C. splendens** Mg. South Leverton, ♀, July 1896: ♂ ♂ ♀, July 1897; Treswell Wood, ♂, 14. vii. 1897 (*Thornley*). Epperstone Park, ♀, 14. vi. 1914 (*Saunt*). Radcliffe-on-Trent, 10. vii. 1912.
- C. hirtella** Lw. South Leverton, ♂, July 1897; Retford, by canal, 24. v. 1901, not uncommon (*Thornley*). Arnold, 4. vi. 1914 (*Robinson*). Radcliffe-on-Trent, by the river, 25 and 29. v. 1912; Crow Wood Hill, West Leake, 24. vii. 1912.
- C. chalybeata** Mg. South Leverton, in vicarage garden (*Thornley*). Hollinwell near Annesley, 12. viii. 1903 (*Carr*). Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).
- C. solstitialis** Fln. Hollinwell near Annesley, 12. viii. 1903; Aspley Woods near Nottingham, 26. vii. 1912; Ollerton, June 1914; Oxtou Bogs, 14. vii. 1915.

CHILOSIA Meig.

- C. sparsa** Lw. Treswell Wood, ♀ ♀, 9. vi. 1900: ♂ ♂, 16. v. 1901: also 15. vi. 1901 (*Thornley*, confirmed by Verrall).
- C. antiqua** Mg. Treswell Wood, two examples, 15. vi. 1901 (*Thornley*).
- C. longula** Zett. Littleborough, 14. vii. 1899; Kingston-upon-Soar, 22. viii. 1901 (*Thornley*).
- C. scutellata** Fln. Sherwood Forest, 5. vi. 1912 (*C. J. Wainwright*).
- C. pulchripes** Lw. South Leverton, common in vicarage garden, May 1900-1901; Treswell Wood, ♀, 15. vii. 1901; Kingston-upon-Soar, Aug. 1904; in garden, Mapperley, Nottingham, 22—25. iv. 1912 and 26. vii. 1914 (*Thornley*). Widmerpool, ♂, 20. iv. 1900; Aspley Woods, 26. vii., 9. viii., 28. viii.—1912 (*Carr*). Arnold, 4. vi. 1914 (*Robinson*). Flawford near Plumtree, 9. viii. 1914 (*Saunt*).
- C. variabilis** Panz. South Leverton, ♀, June 1896; Treswell Wood, both sexes rather common, 4. vi. 1900: ♂ ♂, 16. v. 1901 (*Thornley*). Sherwood Forest, about Edwinstowe and Ollerton, June 1912 and June 1914 (*L. A. Carr*). Mansfield, 1. vi. 1913; Epperstone, ♂, 17. v. 1914; Edwalton, ♂, 9. v. 1912; Owthorpe, ♀, 6. vi. 1914 (*Saunt*). Papplewick, 1. vi. 1914 (*Robinson*). Aspley Woods, 3. v., 28. v., 11. vi.—1912; Linby, 31. v.; Crow Wood Hill, West Leake, 2. vi.—1913.
- C. intonsa** Lw. South Leverton, four ♀ ♀, May and July 1897 (*Thornley*). Oxtou Bogs, 7. vi. 1911 (*Saunt*).
- C. illustrata** Harr. Rampton, 18. vii. 1899 (*Thornley* and *Carr*). Sherwood Forest near Edwinstowe and Ollerton, June 1912-14 (*L. A. Carr*). Crow Wood Hill, etc., West Leake, 17—23. vi. 1912-14 (*Carr*). Cotgrave, 6. vii. 1912 (*Saunt*). Gotham, 3. vii. 1915 (*Thornley*).
- C. grossa** Fln. South Leverton, ♀, 1. iv. 1896 (*Thornley*). Retford, ♂ (*Pegler*). Roe Wood, Winkburn, ♂, 11. iv. 1898.
- C. albitarsis** Mg. Sherwood Forest near Edwinstowe, 7. vi. 1892 (*R. C. Bradley*), and near Ollerton, both sexes, June 1914 (*L. A. Carr*). South Leverton, ♂ ♂ ♀ ♀, May 1896-7; North Leverton, 27. v. 1901; Treswell Wood, common in May and June 1900-1901; Retford, 24. v. 1901; Mapperley, Nottingham, in garden, May 1912-13 (*Thornley*). Bradmore, 13. v. 1913 (*Saunt*). Aspley Woods, very common, 18—28. v. 1912; Gedling, 22. v. 1898; Car Colston, 11. v. 1912.

- C. fraterna** Mg. Treswell Wood, 4. vi. 1900 and 15. vii. 1901 (*Thornley*). Langford Moor near Newark, 16. viii. 1912 (*Carr*), and 25. v. 1913 (*Saunt*).
- C. bergenstammi** Beck. Langford Moor near Newark, one ♂ and four ♀ ♀, 16. viii. 1912 (*Carr*); taken in same locality, 25. v. 1913 (*Saunt*).
- C. vernalis** Flin. South Leverton, in vicarage garden, June and July 1897 and 22. vii. 1901 (*Thornley*).
- C. proxima** Zett. South Leverton, May 1897 and 20. v. 1900 (*Thornley*). Gedling, 23. iv. 1898; Crow Wood Hill, West Leake, two specimens, 24. vii. 1912.
- C. cynocephala** Lw. Langford Moor near Newark, 12. viii. 1899 (*Carr, teste Verrall*).

PLATYCHIRUS St. Farg.

- P. manicatus** Mg. Common throughout the county: May to September.
- P. peltatus** Mg. South Leverton, common; Treswell Wood, frequent; Kingston-upon-Soar; Mapperley, Nottingham (*Thornley*). Worksop (*Houghton*). Sherwood Forest near Edwinstowe and Ollerton; near Newbound Mill, Teversall; Blidworth; Nottingham; East Leake; Widmerpool; Plumtree; etc. May to September.
- P. scutatus** Mg. Common and generally distributed.
- P. albimanus** Fab. Very common and universally distributed.
- P. scambus** Staeg. South Leverton, four ♂ ♂ and one ♀, May 1896; Kingston-upon-Soar, 17. vii. 1911 (*Thornley*). Sherwood Forest near Edwinstowe, June 1912 (*L. A. Carr*). Plumtree, 20. vii. 1911 (*Robinson*). East Leake, 19. v. 1912; Trent-side, Attenborough, 8. viii. 1911.
- P. fulviventris** Mcq. Widmerpool, 23. vi. 1900.
- P. clypeatus** Mg. Common throughout the county: April to September.
- P. angustatus** Zett. South Leverton, ♀ ♀, 3. ix. 1897; Treswell, ♀, 8. ix. 1897 (*Thornley*). Strelley, 14. vi. 1899; Sherwood Rise, Nottingham, in garden, 19. vii. 1912; Bulwell Forest, 2. viii. 1912 (*Carr*). Papplewick, 1. vi. 1914 (*Robinson*).

PYROPHAENA Schin.

- P. granditarsa** Forst. South Leverton, ♀, Sept. 1897; Kingston-upon-Soar, 1904 (*Thornley*). Bulwell Forest, ♀, 29. vi. 1903; Warsop, ♂, 28. viii. 1915 (*Carr*). Sherwood Forest near Ollerton, five ♂♂, one ♀, June 1914 (*L. A. Carr*).

MELANOSTOMA Schin.

- M. ambiguum** Fln. South Leverton, four ♂♂, two ♀♀, April and May, 1897; Mapperley, Nottingham, in garden, several of both sexes, April and May 1912, and subsequently (*Thornley*). Bulwell Forest, 3. vi. 1899; Sherwood Rise, 12. v. 1912, and Sherwood, Nottingham, 22. iv. 1914, in gardens.
- M. dubium** Zett. Worksop (*Lady Robinson, teste Thornley*).
- M. mellinum** L. Common throughout the county: May to September.
- M. scalare** Fab. North and South Leverton; Treswell Wood; Roe Wood, Winkburn; Gotham; Kingston-upon-Soar; Mapperley, Nottingham (*Thornley*). Sherwood Forest near Ollerton (*L. A. Carr*). Epperstone (*Saunt*). Aspley Woods near Nottingham, common; Oxtun Bogs; Colston Bassett. April 25th to August 20th.

MELANGYNA Verr.

- M. quadrimaculata** Verr. Clumber, 1902 (*Lady Robinson*). Edwinstowe, Sherwood Forest, 11—13. iv. 1906 (*Colonel Yerbury*).

LEUCOZONA Schin.

- L. lucorum** L. Worksop (*Houghton*). South Leverton, rather common; North Leverton, 27. v. 1901; Treswell Wood (*Thornley*). Sherwood Forest near Edwinstowe (*L. A. Carr*). Aspley Woods, rather common, 28. v.—9. vii. 1912; Crow Wood Hill, West Leake, common in May and June 1912-13-14; Sherwood, Nottingham, in garden, 5. vi. 1913.

ISCHYROSYPHUS Big.

- I. glaucius** L. Scratta Wood, Shireoaks near Worksop, three ♂♂ on flower heads of *Angelica*, 10. viii. 1903; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912, and very abundant on August 11th, 1914; Aldercar Wood, Newstead, common on *Heracleum* flowers, 29. vii. and 13. viii. 1914.

- I. laternarius** Müll. Treswell Wood, ♀ ♀, 21 and 30. vii. 1897 (*Thornley*). Aspley Woods, 9. vii. 1912; Crow Wood Hill, West Leake, 14. vii. 1912 (*Carr*). Sherwood Forest near Ollerton, ♂ ♂ ♀ ♀, 17—27. vi. 1914 (*L. A. Carr*).

CATABOMBA O.-Sack.

- C. pyrastris** L. Universally distributed in the county.

SYRPHUS Fab.

- S. albostratus** Fln. South Leverton, ♂ ♀, May 1896, and frequently in subsequent years; Treswell Wood, common, 4. vi. and 4. ix. 1900, and 25. v. 1901; Clarborough, 4. vi. 1901; Mapperley, Nottingham, 1. vi. 1913, and rather commonly May to July 1915 (*Thornley*). Sherwood Forest (*C. J. Wainwright*). Near Ollerton, June 1914 (*L. A. Carr*).
- S. tricinctus** Fln. Treswell Wood, 4. vi. 1900; Gotham, 21. viii. 1905; Kingston-upon-Soar, 19. viii. 1914 (*Thornley*). Sherwood Forest near Edwinstowe, ♂, 30. vii. 1899; Aspley Woods, 28. v.; East Leake, 9. vi.; Crow Wood Hill, West Leake, 14. vii.; Cuckney Hay Wood, Nether Langwith, 19. viii.—all 1912.
- S. venustus** Mg. South Leverton, not uncommon in the vicarage garden in early summer; Treswell Wood, common, 16. v. 1901 (*Thornley*). Sherwood Forest (*Wainwright*). Near Ollerton, ♂ ♀, 17—27. vi. 1914 (*L. A. Carr*). Aspley Woods, 28. v. and 9. vii. 1912; East Leake, 9. vi. 1912 (*Carr*). Trowell, 15. vi. 1913; Owthorpe, 6 and 14. vi. 1914 (*Saunt*).
- S. lunulatus** Mg. Sherwood Forest (*Wainwright*). South Leverton, ♂, June 1896: two ♂ ♂ and two ♀ ♀, May and June 1897: one ♀, 25. v. 1900; Mapperley, Nottingham, 25. v. 1915 (*Thornley*). Oxton Bogs, 14. vii. 1915.
- S. nigricornis** Verr. Sherwood Forest (*Wainwright*).
- S. torvus** O.-S. Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Carr* and *Robinson*), and near Ollerton, ♂ ♂ ♀, 17—27. vi. 1914 (*L. A. Carr*). Treswell Wood, ♀, 16. v. 1901; Mapperley, Nottingham, in garden, ♂, 26. vii. 1914 (*Thornley*). Nottingham, 27. vii. 1898 (*Carr*). Owthorpe, 18. v. 1913 (*Saunt*).
- S. annulatus** Zett. Sherwood Forest (*Wainwright*).
- S. lineola** Zett. 'I introduced this species to the British list on the strength of a specimen I took in Sherwood Forest,

6th June 1892' (C. J. Wainwright). The specimen, a male, is most unmistakably *S. lineola* (Verrill, *British Sepsidae*, p. 360).

- S. grossulariae** Mg. Aspley Woods and fields adjacent, 9 and 28. viii. 1912, rather common on Umbelliferae and thistles: Thurgarton, 24. viii. 1915 (Carr). Sherwood Forest near Ollerton, June 1914 (L. A. Carr). Worksop (Hadding).
- S. ribesii** L. Common and universally distributed in Nottinghamshire. I have taken it as early as April 25th and as late as October 5th.
- S. vitripennis** Mg. South Leverton, sometimes not uncommon in vicarage garden; Treswell Wood; common in garden at Mapperley, Nottingham, 4. ix. 1912, 16. v. 1913, etc. (Thornley). Nottingham district, rather common; Cuckney Hay Wood; Langford Moor; Sherwood Forest near Edwinstowe and Ollerton, etc.
- S. latifasciatus** Meq. South Leverton, two ♀♀, May and June 1897; Treswell Wood, ♀, 15. vii. 1901; Mapperley, Nottingham, in garden, 8 and 30. vii. 1915 (Thornley). North Leverton, 14. vi. 1901 (F. Shaw). Sherwood Rise, Nottingham, in garden, 30. vi. 1912.
- S. nitidicollis** Mg. South Leverton, one ♀, 22. v. 1901 (Thornley).
- S. corollae** Fab. South Leverton and Treswell, moderately common; Nottingham: Kingston-upon-Sear (Thornley), Sherwood Rise, etc., Nottingham, in gardens, rather common; Bulwell Forest; Hucknall Torkard; Blidworth; East Leake; Sherwood Forest near Edwinstowe and Ollerton (Carr). Bagthorpe, Nottingham; Cotgrave (Robinson). Dates range from May 12th to September 8th. This is regarded by Verrill as the commonest British species of the genus, but it is certainly not so in Nottinghamshire.
- S. luniger** Mg. Common throughout the county: my dates are from April 22nd to September 18th.
- S. bifasciatus** Fab. South Leverton, common; Treswell Wood; common in garden at Mapperley, Nottingham, in May (Thornley). Worksop (Lady Robinson, Houghton). Sherwood Forest near Edwinstowe, 12. vi. 1912; Sherwood, Nottingham, in garden during May; Aspley Woods, 28. v. 1912; Crow Wood Hill, West Leake, 17. v. 1914 (Carr). Lambley, 6. vi. 1911; Gamston near Nottingham, 25. iv. 1912 (Robinson).

- S. balteatus** De G. Very common and universally distributed in Nottinghamshire, from June 23rd to October 5th. The Rev. A. Thornley took a specimen on ivy bloom at South Leverton on December 6th, 1900.
- S. cinctellus** Zett. Sherwood Forest near Edwinstowe and Ollerton, June 1912-14 (*L. A. Carr*). Annesley, 15. viii. 1914 (*Saunt*). Aspley Woods, 16 and 26. vii. and 9. viii. 1912; Crow Wood Hill, West Leake, 14. vii. 1912 (*Carr*). Kingston-upon-Soar and West Leake Hills, not uncommon on *Pastinaca sativa*, 22. viii. 1901 (*Thornley*).
- S. cinctus** Fln. Aspley Woods near Nottingham, 28. v., 11. vi. and 16. vii. 1912 (*Carr*). Mapperley, Nottingham, in garden, 1. vi. 1913, 26. vii. 1914, and 10 and 30. vi. 1915; Kingston-upon-Soar, ♂, 3. viii. 1915 (*Thornley*).
- S. auricollis** Mg. The type form occurred at Sherwood Forest near Ollerton in July 1912 (*L. A. Carr*), and at Aspley Woods, 9. viii. 1912 (*J. W. Carr*). The var. *maculicornis* seems to be much the commoner form, and all the following records relate to this variety. South Leverton, common in the vicarage garden, May to August 1901, etc.; Treswell Wood, July 1897; Mapperley, Nottingham, 6. viii., 5 and 11. ix. 1912 (*Thornley*). Sherwood Forest (*Wainwright*). Linby, 18. ix. 1912 (*Robinson*). Nottingham, 2. x. 1899, 19. vii. 1912, etc.; Aspley Woods, 9. viii.; East and West Leake, 23. vi.—11. viii.; Langford Moor, 16. viii.—all 1912.
- S. punctulatus** Verr. Crow Wood Hill, West Leake, one ♀, 17. vi. 1914.
- S. umbellatarum** Fab. South Leverton, two ♂♂ and two ♀♀ in 1894, and one ♂ in August 1897 (*Thornley*). Worksop (*Houghton*). Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Robinson*). Aspley Woods near Nottingham, 26. vii., 9 and 28. viii. 1912.
- S. compositarum** Verr. Hollinwell golf-links near Annesley, 12. viii. 1903.
- S. lasiophthalmus** Zett. South Leverton, one ♀, June 1897 (*Thornley*). Aspley Woods, 28. v. 1912.
- S. barbifrons** Fln. Edwinstowe, Sherwood Forest, 21. iv. 1906 (*Col. Yerbury*).

SPHAEROPHORIA St. Farg.

- S. scripta** L. South Leverton, abundant in September 1897; Treswell Wood lane, not uncommon at flowers, 4. ix. 1900;

Kingston-upon-Soar; Gotham, 22. viii. 1912; Mapperley, Nottingham, 2. ix. 1914, etc. (*Thornley*). Worksop (*Hodding*). Sherwood Forest near Edwinstowe, 30. viii.; Cuckney Hay Wood, Nether Langwith, 19. viii.; Langford Moor, 16. viii.; Bulwell Forest, 2 and 8. viii.; Aspley Woods, 28. viii.—all 1912; Thorney, 5. viii. 1899 (*Carr*). Cotgrave, 6. vii. 1912 (*Saunt*).

var. *dispar* Lw. Blidworth, 22. viii. 1899.

S. menthastri L. Sherwood Forest near Edwinstowe, 6. vi. 1892 (*R. C. Bradley*), and 30. viii. 1912 (*Carr*). Cuckney Hay Wood, Nether Langwith, 19. viii.; Bulwell Forest, 2. viii.; Langford Moor, 16. viii.; East Leake, 11. viii.; Crow Wood Hill, West Leake, 24. vii.—all 1912; Chilwell, 18. viii. 1915 (*Carr*). Edwalton, 14. vii. 1914 (*Saunt*). Cotgrave, 27. vi. 1912 (*Robinson*), and 1. viii. 1914 (*Saunt*). Gotham, 22. viii. 1912 (*Thornley*).

var. *picta* Mg. South Leverton, very common in September 1897; North Leverton, 24. v. 1901; Gotham (*Thornley*). Blidworth, ♂, 22. viii. 1899 (*Carr*). Plumtree, 20. vii. 1911 (*Robinson*).

S. flavicauda Zett. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*). Aspley Woods, 28. v. 1912; Nottingham, in garden at Sherwood Rise, 6, 18 and 28. vii. and 1. viii. 1912 (*Carr*). Cotgrave, 6. vii. 1912 (*Saunt*). Thrumpton, 12. viii. 1912 (*Thornley*).

? var. *nitidicollis* Zett. South Leverton, ♂, May 1896; ♂ ♀, 1897 (*Thornley*).

BACCHA Fab.

B. obscuripennis Mg. South Leverton, not uncommon in the vicarage garden; Treswell Wood, not uncommon at flowers, 3. x. 1900; Kingston-upon-Soar (*Thornley*). Epperstone Park, 17. v.; Owthorpe, 6. vi.—1914; Widmerpool, 7. ix. 1913 (*Saunt*). Strelley, 14. vi. 1899; Aspley Woods, not uncommon; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Crow Wood Hill, West Leake, 24. vii. and 10. viii. 1912; Thurgarton, several, 24. viii. 1915.

[NOTE.—Some of the specimens collected in Notts. appear to be *B. elongata* Fab., while others are intermediate between the two forms.]

ASCIA Meig.

A. podagrica Fab. South Leverton, 18. iv. 1898 and subsequently, very common, flying low in hedgerows in vicarage

garden; Kingston-upon-Soar; Mapperley, Nottingham, 14. vi. 1914 (*Thornley*). Worksop (*Lady Robinson, Houghton*). Sherwood Forest near Edwinstowe, 30. viii. 1912, and Ollerton, June 1914; Sherwood, Nottingham, 24. v. 1913 (*Carr*). Thorney, Aug. 1913 (*L. A. Carr*). Radcliffe-on-Trent, 25. ix. 1913 and 24. ix. 1914 (*Robinson*). Plumtree, 9. viii. 1914 (*Saunt*).

BRACHYOPA Meig.

B. bicolor Fln. Aspley Woods near Nottingham, 28. v. and 11. vi. 1912.

RHINGIA Scop.

R. campestris Mg. Common and generally distributed.

VOLUCELLA Geoff.

V. bombylans L. South Leverton and Treswell, both forms common in 1897; Sutton near Retford (*Thornley*). Worksop (*Lady Robinson, Hodding*). Sherwood Forest near Edwinstowe and Ollerton, both forms rather common, 17—27. vi. 1914 (*L. A. Carr*). Langford Moor, very common, 29. vi. 1899 (*Thornley and Carr*). Teversall, 14. vii. 1898; Cinder-hill, 30. vi. 1903; West Leake, 23. vi. 1912 (*Carr*). Epperstone Park, June and July 1911-12; East Leake, 11. vii.; Owthorpe, 20. vi.—1914 (*Saunt*). Both the forms—*bombylans* and *plumata*—are fairly common.

V. pellucens L. South Leverton; Treswell Wood, common (*Thornley*). Worksop (*Hodding*). Sherwood Forest near Edwinstowe and Ollerton, common; Langford Moor, very common; Wigsley Wood; Cuckney Hay Wood, Nether Langwith; Beauvale Woods; Aspley Woods; Widmerpool; etc. (*Carr*). Epperstone Park; Bunny; Owthorpe (*Saunt*). My dates are from June 11th to August 30th.

ERISTALIS Latr.

E. sepulchralis L. South Leverton, one ♂ and two ♀♀, July and August 1897, one in July 1900 (*Thornley*). Sherwood Forest, about Ollerton, common in July 1912 and June 1914 (*L. A. Carr*). Bulwell Forest, 2 and 8. viii. 1912.

E. tenax L. South Leverton, common; Kingston-upon-Soar (*Thornley*). Worksop (*Lady Robinson, Houghton, Hodding*). Sherwood Forest near Ollerton, common, June 1914 (*L. A. Carr*). Common in my garden at Nottingham to middle of

October; Edwinstowe; Bulwell Forest; Linby; Widmerpool (Carr). Foss-road near Cotgrave (Dawson). Bunny; Owthorpe (Saunt).

E. intricarius L. South Leverton, ♀ ♀, May and June 1896; Treswell Wood; Barrow Hills, Everton, 13. ix. 1901; Kingston-upon-Soar, ♂, 22. viii. 1901 (Thornley). Sherwood Forest near Edwinstowe and Ollerton, common, 9. vii. 1903, 12. vi. 1912, etc.; Alderear Wood, Newstead, 28. vii. 1899; near Newbound Mill, Teversall, 3. viii. 1912; Epperstone Park; Aspley Woods, July and August 1912; Ruddington, 5. v. 1901 (Carr). Worksop (Hodding). Linby, 18. ix. 1912 (Robinson). Foss-road, Cotgrave (Dawson).

var. *fureus* Verr. Epperstone Park, 9. vii.; Bunny, 7. viii.—1911 (Saunt).

E. arbustorum L. Common throughout the county. My dates range from April 19th to October 2nd.

E. pertinax Scop. Common and universally distributed in Nottinghamshire: I have taken it from April 8th to Oct. 9th.

E. nemorum L. South Leverton, 8. ix. 1900; Treswell Wood, frequent, 15. vi. to 16. viii. 1901, etc. (Thornley). Nottingham, May 1911 (Saunt). Sherwood Forest near Edwinstowe, 30. vii. 1899, and near Ollerton, June 1914.

E. horticola De G. South Leverton; Treswell Wood (where, on August 16th, 1901, I took five species of *Fristalis*); Marnham (Thornley). Sherwood Forest (Wainwright, Carr). Alderear Wood, Newstead; Blidworth (Carr). Bulwell; Stapleford; Trowell; Epperstone Park; Oxtun Bogs; Nottingham (Saunt). Taken from June 6th to Aug. 22nd.

MYIATROPA Rond.

M. florea L. South Leverton, not uncommon at flowers in the vicarage garden; Treswell Wood; Mapperley, Nottingham (Thornley). Worksop (Hodding). Sherwood Forest near Edwinstowe and Ollerton (Bradley and Wainwright, Carr). Langford Moor; Epperstone Park (Saunt). Watnall (Robinson). Cuckney Hay Wood; Roe Wood, Winkburn; Beauvale Woods; Aspley Woods; Nottingham; Thurgarton; Widmerpool; West Leake. Taken from May 17th to August 24th.

HELOPHILUS Meig.

H. trivittatus Fab. Bunny, one specimen, 23. viii. 1899 (Carr). Kingston-upon-Soar, one ♀, Aug. 1904 (F. Wakerley, *vide* Thornley). Radcliffe-on-Trent, one, 24. ix. 1914 (Robinson).

- H. hybridus** Lw. Treswell Wood, 9. viii.; Saundby, 4. vii.—1901 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Kingston-upon-Soar (*vide Thornley*). Oxtan Bogs, 7. vi. 1911; Owthorpe, 28. viii. 1914 (*Saunt*). Radcliffe-on-Trent, under the cliff by the river, 21. vi. 1913.
- H. pendulus** L. Distributed throughout the county and moderately common. My records extend from June 1st to September 25th.
- H. versicolor** Fab. Sherwood Forest near Ollerton, common, 17—27. vi. 1914 (*L. A. Carr*).
- H. transfugus** L. Several seen and one captured at Marnham, flying about watercress flowers in the bed of the old Trent, 19. vii. 1901 (*Thornley*). Bulwell Forest, near the spring, both sexes, 8. viii. 1912.
- H. lineatus** Fab. Near the spring on Bulwell Forest, common, 2—8. viii. 1912; Sherwood Forest near Ollerton, June 1914.

MERODON Meig.

- M. equestris** Fab. Bulwell Forest, ♂, 17. vi. 1900; garden at Sherwood Rise, Nottingham, 1. vi. and 6. vii. 1912; common in my garden at Sherwood, Nottingham, June 1914 (*Carr*). Radcliffe-on-Trent, by the river, 21. vi. 1913; North Wheatley, a ♂, together with a ♀ of var. *narcissi* Fab., taken on a clump of narcissus in rectory garden, 18. vi. 1902 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- var. *narcissi* Fab. North Wheatley; Mapperley, Nottingham, in garden, 27. v. and 15. vi. 1912 and 22. vi. 1915 (*Thornley*). Worksop (*Lady Robinson*). Sherwood, Nottingham, in my garden, frequent, June 1914, etc.
- var. *validus* Mg. Garden, Pelham Road, Nottingham, 16. v. 1912 (*Carr*). Garden at Mapperley, 6. vii. 1915 (*Thornley*).

CRIORRHINA Meq.

- C. ranunculi** Panz. Sherwood Forest, 6. vi. 1892 (*W. Harrison*); one specimen in same locality (*R. C. Bradley*). Budby, 16. iv. 1906 (*Col. Yerbury*).
- C. berberina** Fab. Wellow Park, 24. viii. 1886 (*Rev. W. Becher*). Sherwood Forest, June 1892 (*Bradley* and *Wainwright*). Epperstone Park, 1912 (*Saunt*).
- C. oxyacanthae** Mg. Wellow Park, 21. viii. 1886 (*Becher*). South Leverton, one specimen in June 1896, and one or two more in 1897-8 (*Thornley*).

- C. floccosa** Mg. Sherwood Forest, common, 5. vi. 1892 (*Bradley and Wainwright*). South Leverton, one ♀, June 1896; one ♂, May 1897; one ♂, 22. v. 1901 (*Thornley*).

BRACHYPALPUS Meq.

- B. bimaculatus** Meq. Sherwood Forest, 5. vi. 1892, one specimen taken by each collector (*R. C. Bradley and C. J. Wainwright, E.M.M., 1892, p. 289*).

XYLOTA Meig.

- X. segnis** L. Treswell Wood; one ♀ in garden at Mapperley, Nottingham, 1. viii. 1915 (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton, common; Cuckney Hay Wood, Nether Langwith; Roe Wood, Winkburn; Langford Moor; Beauvale Woods; Aspley Woods, common; Oxtan Bogs; Radcliffe-on-Trent; Crow Wood Hill, West Leake (*Carr*). Epperstone Park; Owthorpe (*Saunt*). My dates range from May 14th to August 28th.
- X. lenta** Mg. Southwell, ♂, 15. vi. 1899; Aspley Woods, 28. v. 1912 (*Carr*). Epperstone Park, 11. vi. and 9. vii. 1911 (*Saunt*).
- X. sylvarum** L. Treswell Wood, four ♂♂ and three ♀♀, 10—14. vii. 1897 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Epperstone Park, 9. vii. 1911 (*Saunt*). Wigsley Wood, 7. viii. 1899; Langford Moor, 29. vi. 1899; Aspley Woods, common from July 9th to 26th, 1912; Oxtan Bogs, 14. vii. 1915.
- X. florum** Fab. Sherwood Forest near Ollerton, ♂ ♀ ♀, June 1914 (*L. A. Carr*).

SYRITTA St. Farg.

- S. pipiens** L. Common everywhere in Nottinghamshire from April 7th to October 8th.

EUMERUS Meig.

- E. ornatus** Mg. Beauvale Woods, 12. vii. 1912.
- E. strigatus** Fln. Kingston-upon-Soar, Aug. 1904 (*F. Wakerley, vide Thornley*). Sherwood Rise, Nottingham, in garden, 25. v. 1912; East Leake, 2. vi. 1915.

CHRYSOCHLAMYS Rond.

- C. cuprea** Scop. Treswell Wood, 14. vii. 1897, 4. vi. 1900, 7. v. 1901; and very common in lane on east side of wood, 4. ix. 1900 (*Thornley*). Sherwood Forest near Edwinstowe, ♂ ♀, 12. vi. 1912 (*L. A. Carr*). Epperstone Park, 14. vi. 1914 (*Saunt*).

CHRYSOTOXUM Meig.

- C. cautum** Harr. Sherwood Forest, 7. vi. 1892 (*R. C. Bradley* and *C. J. Wainwright*). South Leverton, June 1898 and 26. v. 1900; Treswell Wood, 9. vi. 1900 (*Thornley*). Kingston-upon-Soar, Aug. 1904 (*F. Wakerley*).
- C. arcuatum** L. Sherwood Forest (*Wainwright*).
- C. bicinctum** L. South Leverton, ♀, June 1896; ♂ ♀, July 1897; not uncommon in hedge bottoms in July 1899; Treswell Wood, three ♀ ♀, July 1897 (*Thornley*). Widmerpool, ♂, 23. vi.; ♀, 11. viii.—1900.

CONOPIDAE.**CONOPS** L.

- C. vesicularis** L. Langford Moor near Newark, two ♂ ♂, 10. vi. 1900.
- C. quadrifasciata** De G. Langford Moor, two specimens, 16. viii. 1912 (*Carr*). Roe Wood, Winkburn, 26. vii. 1915 (*Thornley*).
- C. strigata** Mg. Langford Moor, one specimen, 12. viii. 1899.
- C. flavipes** L. South Leverton, ♂ ♀, July 1896, and one ♀ in Aug. 1897 (*Thornley*). Sherwood Forest near Edwinstowe (2 ♂ ♂, 1 ♀) and Budby (1 ♂), 30. vii. 1899; Blidworth, one ♀, 22. viii. 1899; Hollinwell Golf course near Annesley, 12. viii. 1903; Aldercar Wood, Newstead, 13. viii. 1914; Langford Moor near Newark, six specimens, 16. viii. 1912; Bunny, 23. viii. 1899.

PHYSOCEPHALA Schin.

- P. rufipes** Fab. Treswell, on flowers of *Cnicus arvensis*, 4. ix. 1900; West Leake Hills, 5. viii. 1906 (*Thornley*). Cotgrave, 6. vii. 1912 (*Saunt*). Wigsley, 7. viii. 1899; Langford Moor, 16. viii. 1912.

SICUS Scop.

- S. ferrugineus** L. Wigsley, 7. viii. 1899; Langford Moor, 16. viii. 1912; Sherwood Forest near Edwinstowe, ♂, 30. viii. 1912.

MYOPA Fab.

- M. buccata** L. Sherwood Forest, 6. vi. 1892 (*R. C. Bradley*). Treswell Wood, two specimens, 4. vi. 1900 (*Thornley*). Bulwell Forest, 20. v. 1900 (*Carr*). Bradmore, 13. v. 1913 (*Saunt*).
- M. testacea** L. South Leverton, five specimens, May 1897, and one, 2. vi. 1900 (*Thornley*). Rainworth, ♂, 28. v. 1898; Bulwell Forest, two specimens, 20. v. 1900.

OESTRIDAE.**GASTROPHILUS** Leach.

- G. equi** Fab. Kingston-upon-Soar, August 1904 (*Thornley*).

HYPODERMA Latr.

- H. bovis** De G. No specimens of the perfect fly appear to have been taken by any local entomologist, but the larvae are common enough in the hides of cattle.

OESTRUS L.

- Oe. ovis** L. South Leverton, July 1898 (*Thornley*).

TACHINIDAE.**MERIANIA** Dsv.

- M. puparum** Fab. Sherwood Forest, 5. vi. 1892 (*R. C. Bradley*).

GYMNOCHAETA Dsv.

- G. viridis** Fln. Flawford near Plumtree, 9. viii. 1914 (*Saunt*).

EXORISTA Meig.

- E. cheloniae** Rond. Treswell Wood, 16. viii. 1901 (*Thornley*).

BLEPHARIDEA Rond.

- B. vulgaris** Fln. South Leverton, several in May 1896, also 26. v. 1900 and 21. vii. 1901; Treswell Wood, 25. v. 1901; Nottingham, ♂, 8. v. 1912 (*Thornley*).

PHOROCERA Dsv.

- P. cilipeda** Rond. South Leverton, ♀, May 1896 (*Thornley*).

TACHINA Meig.

- T. rustica** Mg. South Leverton, ♂, 11. vii. 1898; Treswell Wood, 15. vi. 1901 (*Thornley*).

GERMARIA Dsv.

- G. ruficeps** Fln. South Leverton, 20. vii. 1901 (*Thornley*).

GONIA Meig.

- G. capitata** De G. Bradmore, 19. iv. 1914 (*Saunt*).

MONOCHAETA Br. and Berg.

- M. leucophaea** Mg. Edwinstowe, Sherwood Forest, 11. iv. 1906 (*Col. Yerbury*).

APOROMYIA Rond.

- A. dubia** Fln. Treswell Wood, 6. v. 1899 (*Thornley*).

MELANOTA Rond.

- M. volvulus** Fab. Treswell Wood, 21. vii. 1897 and 5 and 16. viii. 1901 (*Thornley*). Sneinton, Nottingham, June 1914 (*Saunt*).

THELAIRA Dsv.

- T. leucozona** Panz. South Leverton, ♂, July 1897; Treswell Wood, ♂ ♀, July 1897; Mapperley, Nottingham, in garden, frequent during July 1915 (*Thornley*).

MYIOBIA Dsv.

- M. fenestrata** Mg. Treswell Wood, 5. ix. 1900 (*Thornley*).

OLIVIERIA Dsv.

- O. lateralis** Fab. South Leverton; Rampton, 28. vi. 1901; Kingston-upon-Soar, 22. vii. 1914; Crown End Wood, West Leake, 12. viii. 1904; Thrumpton, 12. viii. 1912 (*Thornley*). Wigsley and Thorney, 7 and 8. viii. 1899; Gotham, 28. viii. 1906; West Leake, ♂ ♀, 6. ix. 1907 and others on 24. vii. 1912 (*Carr*). Worksop (*Houghton*). East Leake; Bradmore; Edwalton; Calverton; 11. vii.—30. viii. 1914 (*Saunt*).

MICROPALPUS Mcq.

- M. vulpinus** Fln. Blidworth, 22. viii. 1899 (*Carr*). Bradmore, 19. iv. 1914 (*Saunt*).

ERIGONE Dsv.

- E. radicum** Fab. Treswell Wood, 16. viii. 1901; garden at Mapperley, Nottingham, abundant on shrubby *Veronica*, 16. viii. 1914, etc. (*Thornley*). Nottingham and Bulwel Aug. 1914 (*Saunt*).
- E. strenua** Mg. Langford Moor near Newark, 5. vi. 1911; Epperstone Park (*Saunt*).

ECHINOMYIA Dum.

- E. fera** L. Sherwood Forest (*C. J. Wainwright*). Near Edwinstowe, Sherwood Forest, several specimens, 30. vii. 1899.

PLAGIA Meig.

- P. ruralis** Fln. Treswell, ♂, 8. ix. 1897 (*Thornley*).

ROESELIA Dsv.

- R. antiqua** Fln. Mapperley, Nottingham, in garden, 20. vii. 1913 (*Thornley*).

BLEPHAROMYIA Br. and Berg.

- B. amplicornis** Zett. Treswell, two specimens, May 1897 (*Thornley*). [One of these specimens was described by Mr. Meade (*Ent. Mo. Mag.*, 1897, p. 223) as new, under the name of *Phorocera incerta*; it is now in the Edinburgh Museum.]

SIPHONA Meig.

- S. cristata** Fab. Bagthorpe, Nottingham, ♀, 18. vii. 1912 (*Carr*, determined by P. H. Grimshaw).

- S. geniculata** De G. South Leverton, abundant; Mapperley, Nottingham 18. vii. 1915 (*Thornley*). Gedling, 22. v. 1898.

TRIXA Meig.

- T. oestroidea** Dsv. Treswell Wood, 10. vii. 1897; Clarborough, 18. ix. 1901; South Leverton, 23. vi. 1902; Wellow Park, 20. ix. 1911; Gotham, 22. viii. 1912 (*Thornley*).

FORTISIA Rond.

- F. foeda** Mg. South Leverton, ♀, July 1897; also 18. vii. 1900 (*Thornley*).

CYNOMYIA Dsv.

- C. alpina** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*, determined by Grimshaw).
C. mortuorum L. South Leverton, ♂, 1894 (*Thornley*).

ONESIA Dsv.

- O. sepulchralis** L. South Leverton, May to August 1897 and 23. vii. 1901; Treswell Wood, 1. v. 1901; West Leake Hills, Aug. 1912 (*Thornley*). Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Radcliffe-on-Trent, 29. v. 1912 (*Carr*). Tollerton, 23. v. 1913 (*Robinson*).
O. cognata Mg. Aspley Woods, 11. vi. 1912; Sherwood, Nottingham, 29. vi. 1913 (*Carr*). Mapperley, 13 and 30. vii. and 22. viii. 1915 (*Thornley*).

SARCOPHAGA Meig.

- S. carnaria** L. Common throughout the county. *S. similis* Meade, which is sunk under *S. carnaria* by Verrall, was taken by Rev. A. Thornley at South Leverton and Treswell Wood.
S. atropos Mg. South Leverton, August 1897 (*Thornley*). A ♀, probably of this species, from Sherwood Forest near Edwinstowe, 30. vii. 1899.
S. agricola Mg. South Leverton, four ♂♂, May and June 1897; Gotham, 22. viii. 1912 (*Thornley*).
S. haemorrhoidalis Mg. South Leverton, 20. v. 1901 (*Thornley*).

NYCTIA Dsv.

N. halterata Panz. East Leake, 19. vi. 1912.

METOPIA Meig.

M. leucocephala Rossi. Bulwell Forest, about the burrows of a *Crabro*, 17. vi. 1900.

SPHIXAPATA Rond.

S. conica Fln. Bulwell Forest, 29. vii. 1900.

DEXIOSOMA Rond.

D. caninum Fab. Aldercar Wood, Newstead, 28. vii. 1899.

DEXIA Meig.

D. vacua Fln. Thorney, 8. viii. 1899.

MUSCIDAE.

STOMOXYS Geoff.

S. calcitrans L. South Leverton and Nottingham, very common from March 20th to October 10th ; Kingston-upon-Soar (*Thornley*). Southwell ; Sherwood Forest, about Edwinstowe and Ollerton (*Carr*). Bilborough (*Robinson*).

HAEMATOBIA Dsv.

H. stimulans Mg. Sherwood Forest near Ollerton, ♂♂, June 1914 (*L. A. Carr*). Watnall, 28. v. 1914 (*Robinson*).

POLLENIA Dsv.

P. rudis Fab. South Leverton, common ; Treswell Wood, on tree trunks, 21. iii. 1898 (*Thornley*). Worksop (*Houghton*). Linby, 7. iv. 1898 ; Langford Moor, 16. viii. ; Bingham, 11. iv. ; West Leake, 14. vii.—all 1912.

GRAPHOMYIA Dsv.

G. maculata Scop. South Leverton and Sutton near Retford, common ; Mapperley, Nottingham (*Thornley*). Sherwood Forest ; Cuckney Hay Wood ; Bulwell Forest ; Aspley Woods ; Radcliffe-on-Trent (*Carr*). Arnold (*Robinson*). Annesley ; Bulwell ; Edwalton (*Saunt*). May to September.

MUSCA L.

M. domestica L. Common in houses, etc.

M. corvina Fab. South Leverton, common : I saw scores— apparently all males— on a gravestone in the churchyard on May 14, 1901 ; Nottingham and Kingston-upon-Soar, very abundant (*Thornley*). Worksop (*Houghton*). Sherwood Forest, Ollerton ; Southwell ; Winkburn ; Bingham ; East Leake ; Widmerpool ; very abundant in last two places in August 1906 (*Carr*). Hoveringham (*Robinson*). Taken from March 31st to September 2nd.

MUSCINA Desv. (*Cyrtoneura* Mcq.).

M. stabulans Fln. South Leverton, common : a ♀ was taken on January 19th, 1898, on window in vicarage ; Kingston-upon-Soar (*Thornley*). Ollerton district ; Nottingham, very common.

M. pabulorum Fln. South Leverton, one ♂, 1894 (*Thornley*).

M. assimilis Fln. (*Cyrt. caesia* Mg.). South Leverton, one ♂, 1896 (*Thornley*).

MORELLIA Desv.

M. simplex L. Mapperley, Nottingham, in garden, both sexes, May and June 1912.

M. hortorum Fln. Common throughout the county.

MESEMBRINA Meig.

M. meridiana L. Generally distributed and common.

PYRELLIA Desv.

P. lasiophthalma Mcq. South Leverton, common in vicarage garden, 11. iii. 1899, etc. Treswell Wood, ♂, 21. iii. 1898 (*Thornley*). Ollerton ; Roe Wood, Winkburn, ♂ ♂, 8—11. iv. 1898 ; Aspley Woods, 16. vii. 1912 ; Radcliffe-on-Trent, 1. iv. 1914 (*Carr*). Papplewick, 1. vi. 1914 (*Robinson*).

PROTOCALLIPHORA Hough.

P. azurea Fln. Nottingham, one ♀, 1. x. 1897 (*Thornley*).

P. groenlandica Zett. South Leverton, 18. vii. 1900 ; North Leverton, 27. v. 1901 ; Rolleston (*Thornley*). Hucknall

Torkard, 1. vi. 1911 (*Robinson*). Abundant in gardens in Nottingham in April and May 1913, etc. (*Thornley and Carr*). Wilford, 19. v. 1914.

CALLIPHORA Desv.

- C. erythrocephala** Mg. Abundant everywhere in the county from February to October.
- C. vomitoria** L. South Leverton, common; Gotham; Sherwood Forest, common; Nottingham, abundant; West Leake (*Thornley, Carr*). Owthorpe (*Saunt*).

EUPHORIA Desv.

- E. cornicina** Fab. Common and generally distributed.

LUCILIA Desv.

- L. caesar** L. Very common everywhere in the county.
- L. sylvorum** Mg. Marnham, one specimen flying over water-cress in bed of old Trent, 19. vii. 1901 (*Thornley*). East Leake, 9. vi. 1912.
- L. sericata** Mg. South Leverton (*Thornley*). Worksop (*Houghton*). Nottingham, ♂ ♀, 27. v. 1898.

ANTHOMYIDAE.*

POLIETES Rond.

- P. albolineata** Flin. South Leverton, very common; Mapperley, Nottingham, 17. v. 1913, 8. vii. 1915, etc. (*Thornley*). Sherwood Forest near Ollerton, etc., abundant; Aspley Woods, Nottingham, 16. vii. 1912 (*Carr*). Nottingham, 26. vii.; Kelham, 24. v.—1913 (*Saunt*). Stapleford, 13. viii.; Bulwell, 22. ix.—1914 (*Robinson*).
- P. lardaria** Fab. Common throughout the county.

PHAONIA Desv.

- P. basalis** Zett. South Leverton; Treswell Wood; Roe Wood, Winkburn; Kingston-upon-Soar (*Thornley*). Worksop

*In the Anthomyidae (as defined in Verrall's *List*) the generic names and sequence adopted here are those of the 'Katalog der Paläarktischen Dipteren' by Becker and others; the species are arranged alphabetically.

- (*Houghton*). Sherwood Forest near Edwinstowe and Ollerton; Langford Moor; Beauvale Woods; Bulwell Hall Park; Aspley Woods; West Leake; etc. (*Carr*). Epperstone Park; Trowell; Annesley (*Saunt*). Taken from June 1st to August 16th.
- P. errans** Mg. Sherwood Forest near Ollerton, four ♂♂, June 1914 (*L. A. Carr*). Plumtree, 4. viii.; Stapleford, ♂♂, 13. viii.—1914 (*Robinson*).
- P. erratica** Fln. South Leverton, common on tree-trunks; Treswell Wood, 15. vii. 1901 (*Thornley*). Langford Moor, 25. v. 1913; Owthorpe, 28. viii. 1914 (*Saunt*).
- P. incana** Wied. South Leverton, common (*Thornley*). Sherwood Forest near Ollerton, common, June 1914 (*L. A. Carr*). Aspley Woods, 16. vii.; Radcliffe-on-Trent, 29. v.—1912 (*Carr*). Nuthall, 9. vii. 1914 (*Robinson*).
- P. laeta** Fln. South Leverton, a very small ♂, May 1897 (*Thornley*).
- P. pallida** Fab. Sherwood Forest near Ollerton, several specimens of both sexes, June 1914; Thorney, ♂, Aug. 1913 (*L. A. Carr*). Stapleford (*Dawson*). Aspley Woods, 9 and 16. vii.; East Leake, 11. viii.; West Leake, 23. vi.—1912 (*Carr*). West Leake Hills, 22. viii. 1901 (*Thornley*). Cotgrave, 7. ix. 1913 (*Saunt*).
- P. rufipalpis** Macq. Radcliffe-on-Trent, ♂, 21. vi. 1913 (*Carr*), and ♀, 12. ix. 1912 (*Robinson*). Mapperley, Nottingham, 24. vii. 1915 (*Thornley*).
- P. scutellaris** Fln. South Leverton, June 1896-7; Treswell Wood, 16. v. 1901 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Trowell, 5. x. 1913 (*Saunt*). Rolleston, June 1912 (*H. Hillman*). Aspley Woods near Nottingham, 18 and 28. v. 1912.
- P. serva** Mg. South Leverton, common in 1897; Mapperley, Nottingham, 5. vii. 1915 (*Thornley*). Gamston near Nottingham, 15. vi. 1911 (*Robinson*). Radcliffe-on-Trent, 25. v. 1912; Crow Wood Hill, West Leake, 19. v. 1914.

ALLOEOSTYLUS Schnabl.

- A. simplex** Wied. Epperstone Park, ♀, 6. ix. 1913.
- A. sudeticus** Schnabl. Bulwell Hall Park, ♂, 8. vii. 1912; Sherwood Forest near Ollerton, ♂, June 1914.

TRICHOPTICUS Rond.

- T. decolor** Fln. (*T. cunctans*, Verr. List). Sherwood Forest near Edwinstowe and Ollerton, ♀ ♀ only, June 1912-14 (*L. A. Carr*). Mapperley, Nottingham, in garden, ♀, September 1914 (*Thornley*).
- T. mutatus** Fln. (*T. semipellucidus*, Verr. List). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*C. Morley*).
- T. pulcher** Meade. Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*).
- T. semicinereus** Wied. Sherwood Forest near Edwinstowe, ♂ ♀, 12. vi. 1912.
- T. variabilis** Fln. Treswell Wood, one ♂, 30. vii. 1897 (*Thornley*). West Leake, two ♂ ♂, 23. vi., and four ♀ ♀, 14. vii. 1912; Crow Wood Hill, West Leake, two ♀ ♀, 14 and 24. vii. 1912.

DRYMEIA Meig.

- D. hamata** Fln. South Leverton, ♂ ♀, Aug. 1897 (*Thornley*).

HEBECNEMA Schnabl.

- H. umbratica** Mg. South Leverton; Mapperley, Nottingham, common; Radcliffe-on-Trent; Kingston-upon-Soar (*Thornley*). Sherwood Forest near Ollerton (*L. A. Carr*). Linby; Gamston near Nottingham; Gotham (*Robinson*). Near Newbound Mill, Teversall; the Dumbles, Kirkby-in-Ashfield; Bingham; Attenborough; Radcliffe-on-Trent, common; East Leake. Taken from April 11th to September 26th.
- H. vespertina** Fln. Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*). Papplewick, ♂, 5. vi. 1913; Radcliffe-on-Trent, ♂, 12. ix., and ♀, 24. ix. 1914 (*Robinson*). Aspley Woods near Nottingham, 28. v. 1912 (*Carr*). Mapperley, Nottingham, 19. vii. 1915 (*Thornley*).

MYDAEA Desv.

- M. anceps** Zett. Nuthall, 9. vii. 1914 (*Robinson*).
- M. calceata** Rond. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). This is probably the first British record for this species.
- M. depuncta** Fln. Aspley Woods, ♀, 28. viii. 1912; Sherwood Forest near Ollerton, June 1914.

- M. duplicata** Mg. South Leverton (*Thornley*). Worksop (*Houghton*). Sherwood Forest near Ollerton, many of both sexes, June 1914 (*L. A. Carr*). Near Newbound Mill, Teversall, ♂, 3. viii.; Nottingham, ♀ ♀, 19. vii.—1912 (*Carr*). Bulwell, 28. vii. 1914 (*Saunt*). Linby, ♂ ♂ ♀, 18. ix. 1912; Nuthall, many ♂ ♂, 25. vi.; Watnall, ♂, 28. v.—1914; Tollerton, ♂, 22. v. 1913 (*Robinson*).
- M. flagripes** Rond. I took a ♂ of this rare species in my garden at Sherwood Rise, Nottingham, 28. vii. 1912.
- M. impuncta** Flin. South Leverton; Treswell Wood; Mapperley, Nottingham, frequent in garden (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton; the Dumbles, Kirkby-in-Ashfield; Aspley Woods, frequent; Wilford; Gedling (*Carr*). Epperstone (*Saunt*). Nuthall; Cinderhill; Cotgrave (*Robinson*). June to September.
- M. lasiophthalma** Mcq. South Leverton, two ♂ ♂, June 1897 (*Thornley*). East Bridgford, ♂, 11. vi. 1914 (*Robinson*).
- M. lucorum** Flin. Common and generally distributed in the county: taken from March 30th to August 30th.
- M. meditabunda** Fab. South Leverton, May 1897 and subsequently; Mapperley, Nottingham, in garden, 26. iv.—10. v. 1912 (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton, June to Aug. 1912; Nottingham, 28. vii.—1912; East Leake, 9. vi. 1912 and 25. v. 1913 (*Carr*). Cinderhill, 19. vi. 1913; Papplewick, 1. vi. 1914; Gamston, 25. iv.; Radcliffe-on-Trent, 12. ix.—1912 (*Robinson*). This is the *Myiospila meditabunda* (Muscidae) of Verrall's *List*.
- M. nigritella** Zett. Mapperley, Nottingham, in garden, 9. v. 1912 (*Thornley*).
- M. pagana** Fab. Edwinstowe, 10 to 14. vi. 1912 (*L. A. Carr*). Trowell, 5. x. 1913; Epperstone, 11. vi. 1911 (*Saunt*). Radcliffe-on-Trent, 25. ix. 1913 (*Robinson*). Aspley Woods, 28. v., and common on 11. vi.; also taken on 28. viii.—1912 (*Carr*). Mapperley, Nottingham, 24. vii. 1915 (*Thornley*).
- M. quadrum** Fab. Nottingham, ♀, 28. vii. 1898.
- M. separata** Mg. South Leverton, four ♀ ♀, 3. ix. 1897; Treswell Wood, 15. vi. 1901 (*Thornley*). Aspley Woods, 9. vii. 1912 (*Carr*). Langford Moor, 2. ix. 1911; Widmerpool, 7. viii. 1913 (*Saunt*).
- M. tincta** Zett. Radcliffe-on-Trent, by the river, 25. v. 1912.

- M. uliginosa** Fln. Nottingham: ♂, 8. vii. 1912 (*Carr*), ♀, 16. ix. 1914 (*Robinson*).
- M. urbana** Mg. South Leverton, not uncommon; Treswell Wood; Mapperley, Nottingham; Radcliffe-on-Trent (*Thornley*). Common about Ollerton, June 1914 (*L. A. Carr*). Papplewick (*Robinson*). Nottingham; Aspley Woods; Gedling; Crow Wood Hill, West Leake (*Carr*). Plumtree (*Saunt*). Cotgrave (*Darson*). Taken from May 25th to Sept. 5th.

HYDROTAEA Desv.

- H. albipuncta** Zett. Papplewick, ♂, 1. vi. 1914 (*Robinson*).
- H. armipes** L. South Leverton; Mapperley, Nottingham, 9. vi. 1912; Kingston-upon-Soar, ♂♂, 9. viii. 1912 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi.; Sherwood Rise, Nottingham, in garden, 4. vi.; Radcliffe-on-Trent, 25. v.; East Leake, 9 and 30. vi.—all 1912.
- H. ciliata** Fab. Aspley Woods, Nottingham, 28. v. 1912; Ollerton, June 1914 (*Carr*). Mapperley, Nottingham, 29 and 31. vii. and 1. viii. 1915 (*Thornley*).
- H. dentipes** Fab. Very common throughout the county. April to September.
- H. irritans** Fln. Very common throughout the county.
- H. meteorica** L. Sherwood Forest near Edwinstowe and Ollerton, common; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 (*Carr*). Papplewick, 5. vi. 1913; Nuthall, 25. vi. 1914; Cinder-hill, 20. vi.; Cotgrave, 8. viii.—1912 (*Robinson*). Mapperley, Nottingham, in garden, 9. vi. 1912 (*Thornley*).
- H. occulta** Mg. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, ♂, 27. v. 1913.
- H. palaestrica** Mg. Crow Wood Hill, West Leake, ♀, 27. v. 1913.
- H. tuberculata** Rond. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Bulwell Forest, ♂, 8. viii.; Aspley Woods, ♂, 18. v.—1912 (*Carr*). Kingston-upon-Soar, ♀, August 1912 (*Thornley*).

OPHYRA Desv.

- O. anthrax** Mg. Mapperley, Nottingham, 31. viii. 1915 (*Thornley*).

- O. leucostoma** Wied. Worksop (*Lady Robinson*). South Leverton, ♂ ♂, Aug. 1897 and Sept. 1900; Mapperley, Nottingham, in garden, June 1912-13-14, common; Kingston-upon-Soar (*Thornley*). Crow Wood Hill, West Leake, 14. vi. 1913.

FANNIA Desv. (*Homalomyia* Bouché).

- F. aerea** Zett. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Car Colston, ♂, 11. v.; Aspley Woods, three ♀ ♀, 18. v., and one ♀, 28. v.—1912.
- F. armata** Mg. Sherwood Forest near Ollerton, ♂ ♂ and ♀ ♀, July 1912 and June 1914 (*L. A. Carr*). Aspley Woods, ♂ ♂, 11. vi., and ♀, 16. vii.; West Leake, 23. vi.—1912.
- F. canicularis** L. Abundant in houses, etc.
- F. coracina** Lw. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). West Leake, ♂, 23. vi. 1912.
- F. genualis** Stein. Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*). Near Newbound Mill, Teversall, ♂, 26. vi. 1913.
- F. hamata** Mcq. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). South Leverton, ♂, June 1897; Mapperley, Nottingham, ♀, 29. vi. 1915 (*Thornley*). Bulwell, 28. v. 1914 (*Robinson*). Aspley Woods, 28. v., 9 and 26. vii., 1912.
- F. incisurata** Zett. Bulwell Forest, ♂ ♂, 12. v. 1912.
- F. polychaeta** Stein. Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Carr and Robinson*). Stapleford, ♀, 13. viii. 1914 (*Robinson*).
- F. scalaris** F. South Leverton, very common; Treswell, common; Nottingham; Kingston-upon-Soar (*Thornley*). Nottingham, very common; Bulwell Forest; the Dumbles, Kirkby-in-Ashfield; Rolleston; etc. Dates range from April 17th to Sept. 23rd.
- F. serena** Fln. Sherwood Forest near Edwinstowe and Ollerton; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Aspley Woods, 18. v. 1912; Bingham, 11. v. 1912 (*Carr*). Papplewick, 5. vi. 1913 (*Robinson*). Mapperley, Nottingham, 5. viii. 1912 (*Thornley*).

COELOMYIA Hal.

- C. spathulata** Zett. (*C. mollissima*, Verr. List). Oxtou Bogs, ♂, 24. iv.; Sherwood, Nottingham, in garden, ♂ ♂, 11 and 23. v.—all 1913.

AZELIA Desv.

- A. aterrima** Mg. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).
- A. cilipes** Hal. Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*). Radcliffe-on-Trent, ♂ ♂, 12. vi. 1914 (*Robinson*).
- A. macquarti** Staeg. South Leverton, ♂, 1894; Mapperley, Nottingham, 26. iv. 1912 (*Thornley*). Sherwood Forest near Ollerton; Kelham, 12. v. 1898; Southwell, 6. vi. 1912, common; near Newbound Mill, Teversall, ♂, 26. vi. 1913; Radcliffe-on-Trent, 10. vii.; East Leake, 9. vi.—1912 (*Carr*). Tollerton, ♂, 22. v.; Cotgrave, ♀, 23. x.—1913 (*Robinson*).
- A. triquetra** Wied. South Leverton, ♂, 1896; garden, Mapperley, Nottingham, 26. iv. 1912 (*Thornley*). The Dumbles Kirkby-in-Ashfield, 28. vi. 1913 (*Thornley* and *Carr*). Cotgrave, ♂, 27. vi. 1912; Bassingfield near Gamston, ♂, 2. vii. 1914 (*Robinson*).
- A. zetterstedtii** Rond. South Leverton, two ♂ ♂, 1896; Mapperley, Nottingham, 1. vi. 1913 (*Thornley*). Sherwood Forest near Ollerton, ♂ ♀, June 1914 (*L. A. Carr*). Near Newbound Mill, Teversall, ♀, 26. vi. 1913; Attenborough, ♂, 14. viii. 1913; Radcliffe-on-Trent, ♀, 25. v.; East Leake, ♂ ♀, 11. viii.—1912 (*Carr*). Cotgrave, ♂ ♂, 27. vi. 1912 (*Robinson*).

LIMNOPHORA Desv.

- L. denigrata** Mg. (*Spilogaster nigrinervis*, Verr. List). Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).

HYDROPHORIA Desv.

- H. conica** Wied. Treswell Wood, ♂ ♀, 14. vii. 1897, etc.; Mapperley, Nottingham, ♂ ♂ ♀ ♀, 1. vi.—5. ix. 1912, etc. (*Thornley*). Edwinstowe and Ollerton, Sherwood Forest, common; Bulwell Hall Park, 8. vii.; Nottingham, 1—8. vi.; West Leake, 23. vi.; Radcliffe-on-Trent, 25. v.—all 1912 (*Carr*). Papplewick, 1. vi. 1914 (*Robinson*).
- H. linogrisea** Mg. Sherwood Forest near Edwinstowe, 12. vi.; Nottingham, 8 and 28. vii.—1912.

HYLEMYIA Desv.

- H. antiqua** Mg. (*Phorbia cepetorum*, Meade, Verr. List). Garden at Mapperley, Nottingham, 7. vii. 1915 (*Thornley*).

- H. brunneilinea** Zett. (*H. seticrura*, Verr. List). Mapperley and Sherwood Rise, Nottingham, ♀ ♀, June 1912; Radcliffe-on-Trent, 25. v. 1912 (*Thornley* and *Carr*). Bulwell, ♀, 22. ix. 1914; Lambley Dumble, ♀, 3. x. 1912 (*Robinson*). Kingston-upon-Soar, ♀, August 1914 (*Thornley*).
- H. brunnescens** Zett. (?) (*H. nigrescens*, Verr. List.). Nottingham, ♂, 8. vi.; Aspley Woods, ♂, 28. v.—1912 (*Carr*). Lambley Dumble, ♂, 3. x. 1912 (*Robinson*).
- H. flavipennis** Fln. Aspley Woods near Nottingham, ♂, 9. viii. 1912.
- H. lasciva** Zett. Aspley Woods, ♀, 16. vii. 1912 (*Carr*). Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).
- H. nigrimana** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Mapperley, Nottingham, in garden, 6. vi. 1915 (*Thornley*).
- H. strigosa** Fab. Common throughout the county: taken from April 20th to September 25th.
- H. variata** Fln. Common and generally distributed: dates range from April 28th to October 3rd.

HAMMOMYIA Rond.

- H. buccata** Fln. Sherwood, Nottingham, ♂, 2. v. 1913.

PEGOMYIA Desv.

- P. betae** Curt. Recorded by E. A. Fitch in *Entomologist* for January 1881, pp. 8-13, where the ravages of the larvae in Nottinghamshire are remarked upon.
- P. bicolor** Wied. South Leverton, ♀; Treswell, ♀, 8. ix. 1897; Mapperley, Nottingham, in garden, both sexes, June and July 1912-14-15 (*Thornley*). Sherwood Forest near Ollerton, ♂ ♀, June 1914 (*L. A. Carr*). Langford Moor, 14. viii. 1914.
- P. femorata** Stein. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).
- P. rufipes** Fln. South Leverton, ♂, June 1897 (*Thornley*).
- P. versicolor** Mg. Mapperley, Nottingham, in garden, ♂, 3. vi. 1914 (*Thornley*). Two ♀ ♀, possibly of this species, from Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

CHORTOPHILA Macq.

- C. brassicae** Bouché. (*Phorbia floccosa*, Verr. List). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Bulwell, 6. vii. 1912; Papplewick, 5. vi.; Tollerton, 22. v.—1913 (*Robinson*). Bingham, 11. iv.; Radcliffe-on-Trent, 25. v.; East Leake, 9. vi.; Cotgrave, 27. vi.—all 1912 (*Carr*). Mapperley, Nottingham, 9. v. 1912, etc. (*Thornley*). All the above records are of ♂♂.
- C. cilicrura** Rond. Sherwood Forest near Ollerton, ♂♂, June 1914 (*L. A. Carr*). Nottingham, ♂, 24. iv.; Bulwell Forest, ♂♂, 12. v.; Southwell, ♂♂, 6. vi.—1912; Crow Wood Hill, West Leake, ♂, 2. vi. 1913 (*Carr*). Cotgrave, ♂♂, 8. viii; Lambley Dumble, 3. x.—1912 (*Robinson*).
- C. discreta** Mg. (?) Sherwood Forest near Edwinstowe, ♂, 30. viii.; Radcliffe-on-Trent, ♂, 29. v.—1912 (*Carr*). Arnold, ♂, 4. vi. 1914 (*Robinson*).
- C. dissecta** Mg. Sherwood Forest near Ollerton, 22 to 26. vii. 1912 (*L. A. Carr*). Bagthorpe, Nottingham, 18. vii.; Colwick, 17. iv.; Cotgrave, 27. vi.—1912; Arnold, 4. vi. 1914 (*Robinson*). Crow Wood Hill, West Leake, 23. vi. and 24. vii. 1912. Males only taken in each locality.
- C. fugax** Mg. (*Phorbia pudica*, Verr. List). South Leverton, ♂, May 1897 (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton, both sexes common, July and August 1912, etc.; Nottingham, ♂♂♀♀, frequent from 10. v. to 2. viii. 1912; Southwell, ♂♂ common, 6. vi. 1912; Radcliffe-on-Trent, ♀, 25. v. 1912 (*Carr*). Linby, ♀, 18. ix. 1912, and ♂, 28. iv. 1914; Papplewick, ♂, 5. vi. 1913; Nuthall, ♀, 25. vi. 1914; Colwick, ♂, 17. iv.; Lambley Dumble, ♂♂, 3. x.; Radcliffe-on-Trent, ♂, 12. ix.—1912; Tollerton, ♂, 22. v. 1913 (*Robinson*).
- C. muscaria** Mg. Treswell Wood, ♂♂, 5. iii. 1898 (*Thornley*). Roe Wood, Winkburn, ♂, 13. iv. 1915.
- C. trapezina** Zett. Papplewick, one ♂, 1. vi. 1914 (*Robinson*).
- C. trichodactyla** Rond. Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Carr* and *Robinson*). Bulwell Forest, ♂, 12. v.; East Leake, ♀, 9. vi.—1912; Nottingham, ♀, 21. v. 1913 (*Carr*). Cinder-hill, ♂, 20. vi.; Hoveringham, ♀, 22. vi.—1915 (*Robinson*).
- C. varicolor** Mg. (?) Aspley Woods, ♀, 18. v.; Radcliffe-on-Trent, ♀♀, 25. v.—1912 (*Carr*). Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).

LASIOPS Meig.

- L. ctenocnema** Kow. Cuckney Hay Wood, Nether Langwith, ♂, 19. viii. 1912 (*Carr*). Mapperley, Nottingham, in garden, 11. vi. 1915 (*Thornley*).

ANTHOMYIA Meig.

- A. aestiva** Mg. (*A. sulciventris*, Verr. List). Sherwood Forest near Edwinstowe and Ollerton, ♂ ♂ ♀ ♀, June to August 1912; Nottingham, ♀, 18. v., and ♂, 25. vi.; Bulwell Hall Park, ♀, 8. vii.; Car Colston, ♂, 11. iv.; East Leake, ♀, 30. vi.—all 1912; Bulwell Forest, ♂, 1. v. 1898; Keyworth, ♀, 3. v. 1898 (*Carr*). Cinder-hill, ♂ ♀, 20. vi.; Gamston near Nottingham, ♂, 25. iv.; Linby, ♀, 18. ix.; Gotham, ♀, 26. ix.—all 1912 (*Robinson*).
- A. pluvialis** L. South Leverton, ♂ ♂, May 1897; Treswell Wood, ♂, 21. vii. 1897 (*Thornley*). Gardens at Sherwood Rise, 14. v. 1912 (*Carr*), and Mapperley, Nottingham, 3. vi. 1912 and 1. vi. 1914 (*Thornley*).
- A. radicum** L. Common. South Leverton: in 1901 some young cabbages were badly attacked by the grubs, producing an appearance like 'Anbury'; Nottingham; Kingston-upon-Soar (*Thornley*). Sherwood Forest near Ollerton and Edwinstowe; Nottingham, very common; Aspley Woods; Bingham; Rolleston; West Leake (*Carr*). Linby; Bilborough; Cinder-hill; Lambley; Cotgrave (*Robinson*). April to October.

MACRORCHIS Rond.

- M. intermedia** Fln. Aspley Woods, ♀, 27. vi. 1912.

HOPLOGASTER Rond.

- H. mollicula** Fln. (?) Near Newbound Mill, Teversall, 26. vi. 1913.

COENOSIA Meig.

- C. humilis** Mg. Sherwood Forest near Ollerton, ♂, 24. vii. 1912.
- C. rufipalpis** Mg. (*C. elegantula*, Verr. List). Crow Wood Hill, West Leake, 17. v. 1914.
- C. sexnotata** Mg. South Leverton, on vicarage window, 8. viii. 1901; Mapperley, Nottingham, 9. vi. 1912, Sept. 1914, and 23. vi. to 19. vii. 1915 (*Thornley*). Nottingham, ♀, 12. v. 1912; Arnold, ♀, 13. viii. 1913.

- C. tigrina** Fab. Sherwood Forest near Edwinstowe, ♀ ♀, 30. viii. 1912, and near Ollerton, ♀ ♀, June 1914; Nottingham, 9. vi. 1913; East Leake, ♂, 19. v. 1912; Crow Wood Hill, West Leake, ♂ ♀, 14. vi. 1913 (*Carr*). Linby, 18. ix.; Lambley Dumble, 3. x.—1912; Bassingfield, 2. vii.; Radcliffe-on-Trent, 24. ix.—1914: all ♀ ♀ (*Robinson*). Kings-ton-upon-Soar, 19. viii. 1914 (*Thornley*).
- C. tricolor** Zett. (*C. infantula*, Verr. List). Radcliffe-on-Trent, 25. v. 1912 (*Thornley* and *Carr*). Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Robinson* and *Carr*). Only ♀ ♀ taken.

SCHOENOMYZA Hal.

- S. litorella** Fln. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).

CORDYLURIDAE.

CORDYLURA Fln.

- C. pudica** Mg. Marshy ground near Newbound Mill, Teversall, 26. vi. 1913.
- C. ciliata** Mg. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).
- C. umbrosa** Lw. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

PARALLELOMMA Beck.

- P. albipes** Fln. Sherwood Forest near Ollerton, common, 17—27. vi. 1914 (*L. A. Carr*). Oxtun Bogs, 14. vii. 1915.

CNEMOPOGON Rond.

- C. apicalis** Mg. Bulwell Forest, near the spring, 8. viii. 1912.

AMAUROSOMA Beck.

- A. fasciatum** Mg. South Leverton, 5. iv. 1899; Treswell Wood, ♀, 5. iv.: ♂, 6. v.: ♂ ♀, 29. v.—1899: also 16. v. 1901 (*Thornley*). Aspley Woods near Nottingham, 18. v. 1912.

NORELLIA Desv.

- N. spinimana** Fln. South Leverton, ♂ ♀, May 1896; Retford, 24. v. 1901 (*Thornley*). Sherwood Forest, June 1914 (*L. A.*

Carr). Annesley, 15. viii. 1914 (*Saunt*). Arnold, 23. vii. 1914; Radcliffe-on-Trent, 1. v. 1912 (*Robinson*). Bulwell Forest, 8. viii. 1912; Lambley, 22. v. 1915.

N. striolata Mg. South Leverton, 26. v. 1900 (*Thornley*).

SPATHIOPHORA Rond.

S. hydromyzina Fln. Radcliffe-on-Trent, 12. vi. and 25. ix. 1913, and 24. ix. 1914; Tollerton, 22. v. 1913 (*Robinson*). Mapperley, Nottingham, ♀, 5. ix. 1914 (*Thornley*).

SCATOPHAGA Meig.

S. suilla Fab. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*).

S. maculipes Zett. Garden at Mapperley, Nottingham, 1. vi. 1912 (*Thornley*).

S. ordinata Beck. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).

S. lutaria Fab. South Leverton, 27. v. 1901, etc., not uncommon; Mapperley, Nottingham, 7. vi. and 5. ix. 1912 (*Thornley*). East Leake, 19. vi.; Aspley Woods, 9. vii.; near Newbound Mill, Teversall, 3. viii.—1912; Sherwood Rise and Sherwood, Nottingham, 28. vii. 1912 and 10. vi. 1913 (*Carr*). Trowell, 5. x. 1913; Cotgrave, 6. vii. 1912 (*Saunt*). Lambley Dumble, 3. x. 1912 (*Robinson*).

S. stercoraria L. Abundant in every part of the county.

S. squalida Mg. (?) Sherwood Forest near Edwinstowe, 30. viii. 1912 (*Robinson*).

S. decipiens Hal. Radcliffe-on-Trent, 24. ix. 1914 (*Robinson*).

CONIOSTERNUM Beck.

C. obscurum Fln. Papplewick, 9. x. 1913 (*Robinson*).

HELOMYZIDAE.

HELOMYZA Fln.

H. variegata Lw. Crow Wood Hill, West Leake, 10. iv. 1915.

H. laevifrons Lw. The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

- H. ustulata** Mg. South Leverton, September 1900 (*Thornley*).
H. bicolor Zett. (*H. zetterstedti* Lw.). Sherwood Forest near Edwinstowe, three specimens from among bracken, 12. vi. 1912.
H. pallida Fln. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
H. flavifrons Zett. Roe Wood, Winkburn, 13. iv. 1915.

ECCOPTOMERA Lw.

- E. ornata** Lw. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*).

LERIA Desv. (*Blepharoptera* Lw.).

- L. spectabilis** Lw. South Leverton, 28. v. 1901 (*Thornley*). Wilford, 26. v. 1914.
L. serrata L. South Leverton, common in the house and stable, 31. i. and 9. ii. 1898 (*Thornley*). Nottingham, frequent, March to July; Roe Wood, Winkburn, 11. iv. 1898; Sherwood Forest near Ollerton.

TEPHROCHLAMYS Lw.

- T. canescens** Mg. (*T. rufiventris*, Verr. List). South Leverton, ♂ ♀, May 1896, and common in the house, 9. ii. 1898 and 21. i. 1901, etc.; Treswell Wood, 5. iii. 1898; Mapperley, Nottingham, 15. v. 1912 and 17. iv. 1914 (*Thornley*). Nottingham, ♀, 2. xi. 1912 (*Robinson*).
T. flavipes Zett. South Leverton, 16. x. 1900; Mapperley, Nottingham, 1. vi. 1912 (*Thornley*).

HETERONEURIDAE.

HETERONEURA Fln.

- H. albimana** Mg. Aspley Woods near Nottingham, several specimens, 11. vi. 1912.

DRYOMYZIDAE.

DRYOMYZA Fln.

- D. flaveola** Fab. Retford, ♂, May 1896; South Leverton, May 1897 and 22. v. 1900 (*Thornley*). Sherwood Forest

near Ollerton, June 1914 (*L. A. Carr*). Aspley Woods, 18. v. 1912.

NEUROCTENA Rond.

N. anilis Fln. South Leverton (*Thornley*). Edwinstowe, Sherwood Forest, 12. vi. 1912; Thurgarton, 24. viii. 1915.

NEOTTIOPHILUM Frfld.

N. praeustum Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

SCIOMYZIDAE.

SCIOMYZA Fln.

S. dubia Fln. Papplewick, 1. vi. 1914 (*Robinson*). Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Glapton near Clifton, 15. v. 1915.

S. albocostata Fln. Sherwood Forest, Edwinstowe, 12. vi.; Aspley Woods near Nottingham, 27. vi.—1912.

TETANOCERA Dum.

T. elata Fab. Treswell Wood, frequent in June and July 1897—1901; Gotham, 28. viii. 1906, 20. viii. 1914 and 3. vii. 1915 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi.; Aspley Woods, 26. vii.—1912; near Newbound Mill, Teversall, 3. viii. 1912 and 26. vi. 1913; Warsop, 28. viii. 1915 (*Carr*). Bulwell, 22. viii. 1914 (*Saunt*).

T. laevifrons Lw. Thorney, Aug. 1913; Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Roe Wood, Winkburn, 26. vii. 1915.

T. sylvatica Mg. Treswell Wood, one ♀, 10. vii. 1897 (*Thornley*). Bulwell, 6. vii. 1911 (*Robinson*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Langford Moor, 14. viii. 1914 (*Morley and Carr*).

T. unicolor Lw. Marshy ground near Newbound Mill, Teversall, 26. vi. 1913.

T. ferruginea Fln. Rolleston, rather common, 25. vii. 1913; near Park Drain station, Misson, 22. ix. 1914.

TRYPETOPTERA Hendel.

T. punctulata Scop. Treswell Wood, 27. vi. 1898 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi.; Crow Wood Hill, West Leake, 24. vii.—1912; Gotham, 3. vii. 1915.

PHERBINA Desv.

- P. coryleti** Scop. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*). Near Moor Farm, Woodborough, 7. ix. 1915.

HEDRONEURA Hendel.

- H. cucularia** L. Park Drain, Misson, 22. ix. 1914.
H. rufa Panz. Cottam, 12. vii. 1899 ; Park Drain, Misson,
22. ix. 1914.

ELGIVA Meig.

- E. albiseta** Scop. South Leverton (*Thornley*). Attenborough,
8. vi. and 14. viii. ; Warsop, 28. viii.—1915.

HYDROMYIA Desv.

- H. dorsalis** Fab. Linby, 7. iv. 1898 ; Bulwell Forest, Nottingham, 21. vii. 1913 ; Oxtun Bogs, 14. vii. ; Warsop, 28. viii.—1915.

LIMNIA Desv.

- L. unguicornis** Scop. South Leverton, ♂ ♀, June 1897 ; Treswell Wood, ♂, 27. vi. 1898 (*Thornley*). Bagthorpe, Nottingham, 18. vii. ; marshy ground near Newbound Mill, Teversall, 3. viii.—1912 (*Carr*). Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*).

DICHAETOPHORA Rond.

- D. obliterata** Fab. South Leverton, one ♀, 1894 (*Thornley*).

SEPEDON Latr.

- S. sphegeus** Fab. South Leverton, September 1898 ; Claborough gypsum pit near Retford, 18. ix. 1901 (*Thornley*).
S. spinipes Scop. South Leverton (*Thornley*).

PSILIDAE.

PSILA Meig.

- P. fimetaria** L. South Leverton, May 1896, also 26. v. and 20. xi. 1900 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Stapleford, 24. v. ; Bradmore, 16. v.—1914 ; Edwalton, 9. v. 1912 (*Saunt*). Lenton, 29. v. ; Tollerton, 22. v.—1913 (*Robinson*). Radcliffe-on-Trent,

10. vii. 1912; Crow Wood Hill, West Leake, 2 and 14. vi. 1913; East Leake, 2. vi. 1915; Widmerpool, 23. vi. 1900; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915.

P. rufa Mg. Worksop (*Houghton*). East Bridgford, 11. vi. 1914 (*Robinson*). Gedling, 12. vi.; near Newbound Mill, Teversall, 26. vi.—1913.

P. pallida Fln. Bagthorpe, Nottingham, 17. vi. 1909 (*Robinson*).

P. rosae Fab. Nottingham, 10. v.; Bulwell Forest, 12. v.—1912 (*Carr*). Crow Wood Hill, West Leake, 11. ix. 1913 (*Thornley*).

P. nigricornis Mg. Sherwood Forest near Edwinstowe, 12. vi.; marshy ground near Newbound Mill, Teversall, 26. vi.; East Leake, 9. viii.—1912; Wilford, 6. vi. 1913.

P. atra Mg. Near Newbound Mill, Teversall, 26. vi. 1913 (*Carr*). Watnall, 28. v. 1914 (*Robinson*).

CHYLIZA Fln.

C. scutellata Fab. (*C. leptogaster* Panz.). Treswell Wood, one ♀, 21. vii. 1897 (*Thornley*).

LOXOCERA Meig.

L. ichneumones L. (*L. albiset*a Schrk.). Thorney, Aug. 1913 (*L. A. Carr*). Near Newbound Mill, Teversall, 3. viii. 1912; Widmerpool, 12. viii. 1914.

L. sylvatica Mg. Treswell Wood, 15. vi. 1901 (*Thornley*).

L. fulviventris Mg. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

LISSA Meig.

L. loxocerina Fln. Beauvale Woods, Greasley, three specimens, 12. vii.; Aspley Woods, five specimens, 9 and 16. vii.—1912.

MICROPEZIDAE.

MICROPEZA Meig.

M. corrigiolata L. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Nuthall, 25. vi. 1914 (*Robinson*). Near the White Post inn, Farnsfield, 3. viii. 1914 (*Saunt*).

M. lateralis Mg. Sherwood Forest near Edwinstowe, 10. viii. 1914.

CALOBATA Meig.

- C. cibaria** L. South Leverton, ♀, June 1897; Mapperley, Nottingham, in garden, 3. vi. 1912 and subsequently (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- C. petronella** L. South Leverton, ♂, June 1897 (*Thornley*). Sherwood Forest near Ollerton, several specimens, July 1912 and June 1914 (*L. A. Carr*). East Bridgford, 11. vi. 1914 (*Robinson*).

ORTALIDAE.

PTILONOTA Lw.

- P. guttata** Mg. Aspley Woods near Nottingham, 27. vi. 1912 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- P. centralis** Fab. South Leverton, ♀, May 1896; North Leverton, 31. v. 1901; Treswell Wood, 29. v. 1899 and 15. vi. 1901; Gamston near Retford, ♂, May 1897 (*Thornley*). Edwinstowe, Sherwood Forest, 12. vi. 1912; Aspley Woods near Nottingham, 18 and 28. v., 11. vi., and 4 and 9. vii. 1912.

HERINA Desv. (*Pteropaectria* Lw.).

- H. afflicta** Mg. West Leake lane, Kingston-upon-Soar, 28. vii. 1914 (*Thornley*). Gotham, common, 3. vii. 1915.
- H. nigrina** Mg. Thorney, August 1913 (*L. A. Carr*). The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Crown End Wood, West Leake, July 1914; Gotham, 3. vii. 1915 (*Thornley and Carr*).
- H. frondescens** L. Marshy ground near Newbound Mill, Teversall, common, 3. viii. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913.

MELIERIA Desv. (*Ceroxys* Mcq.).

- M. picta** Mg. Kingston-upon-Soar, 28. vii. 1905 (*Thornley*).

PLATYSTOMA Meig.

- P. seminationis** L. Trent-bank, Littleborough, common, 14. vii. 1899; South Leverton, 23. vi. 1901 (*Thornley*). Edwinstowe, Sherwood Forest, 12. vi. 1912; Southwell, 9. vi. 1906; East Leake, 9. vi. 1912; Cotgrave, 27. vi. 1912 (*Carr*). Tollerton, 2. vi. 1912 (*Saunt*).

RIVELLIA Desv.

R. syngenesiae Fab. Worksop (*Houghton*).

SEOPTERA Kirby.

S. vibrans L. South Leverton, in vicarage garden, July 1897 and 18. vi. 1900: also in vicarage, 19. vi. 1900; garden at Mapperley, Nottingham, 13. vi. and 8. vii. 1915 (*Thornley*). Garden at Sherwood Rise, Nottingham, 6. vii. 1912 (*Carr*). Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).

CHRYSOMYZA Flin.

C. demandata Fab. Garden at Mapperley, Nottingham, 26. vii. 1914 (*Thornley*).

TRYPETIDAE.

PLATYPAREA Lw.

P. discoidea Fab. Aspley Woods near Nottingham, 18 and 28. v. 1912—one specimen on each date. This is an extremely rare species, and had not been previously taken in the British Islands for a great many years.

ACIDIA Desv.

A. cognata Wied. Treswell Wood (*Thornley*). Linby, 7. viii. 1903; Bulwell Hall Park, 17. viii. 1915 (*Carr*). Bilborough, 13. vii. 1911 (*Robinson*). Flawford near Plumtree, 9. viii. 1914 (*Saunt*).

A. heraclei L. South Leverton, two ♂♂, one ♀, May 1896, also May 1897; Nottingham, several in May 1912, one 5. ix. 1909 (*Thornley* and *Carr*). Aspley Woods, 28. viii.; East Leake, 19. v.—1912; Crow Wood Hill, West Leake, 27. v. 1913; Oxtou Bogs, 14. vii. 1915 (*Carr*). Arnold, 4. vi. 1914 and 10. vi. 1915 (*Robinson*).

SPIOLOGRAPHA Lw.

S. zoë Mg. Sherwood Forest (*Wainwright*). South Leverton, ♂ ♀; Mapperley, Nottingham, frequent in May 1912, one 1. vi. 1913 (*Thornley*). Sherwood Rise and Sherwood, Nottingham, 25. viii. 1912, 1 to 11. vi. 1913, 15. vi. 1915; near Newbound Mill, Teversall, 26. vi. 1913; Cuckney Hay Wood, 19. vi.; Thurgarton, 24. viii.—1915 (*Carr*). Papplewick, 1. vi. 1914 (*Robinson*).

TRYPETA Meig.

- T. jaceae** Desv. Aldercar Wood, Newstead, 29. vii. 1914; Fiskerton, 25. vii. 1913; Crow Wood Hill, West Leake, 9. viii. 1914; Warsop, 25. viii. 1915.
- T. cylindrica** Desv. South Leverton, ♂, June 1897; North Leverton, 27. v. 1901; Treswell Wood, common on heads of *Unicus palustris*, 9. vi. 1900, others 25. v. 1901; West Leake Hills, abundant on burdock, 28. vii. 1905 (*Thornley*). Cotgrave, 1. vii. 1914 (*Saunt*).
- T. tussilaginis** Fab. Crown End Wood, West Leake, July 1914 (*Thornley*).
- T. florescentiae** L. Cuckney Hay Wood, Nether Langwith, 19. vi. 1915.

UROPHORA Desv.

- U. solstitialis** L. Trent-bank, Littleborough, three ♂♂, one ♀, 14. vii. 1899; Treswell Wood, 15. vi. 1901 (*Thornley*). Near Newbound Mill, Teversall, 3. viii.; Crow Wood Hill, West Leake, common, 24. vii.—1912 (*Carr*). Nuthall, 1. vii. 1915 (*Robinson*).
- U. cardui** L. Gotham, in lane leading to West Leake Hills, on thistles, July 1905 (*Thornley*).

OXYPHORA Desv.

- O. flava** Geoffr. (*Tephritis miliaria*, Verr. List). Treswell Wood, ♀♀, 27. vi. 1898 and 15. vi. 1901 (*Thornley*). Rufford, 3. viii. 1914 (*Saunt*). Gotham, ♂♀, 3. vii.; Roe Wood, Winkburn, 26. vii.—1915 (*Thornley* and *Carr*). Cuckney Hay Wood, Nether Langwith, fairly common on thistle heads, 19. vi.; Oxtan Bogs, 14. vii.—1915.

TEPHRITIS Latr.

- T. dioscurea** Lw. Fiskerton, 25. vii. 1913.
- T. bardanae** Schrk. Sherwood Forest (*Wainwright*).

EUARESTA Lw.

- E. conjuncta** Lw. Linby, 18. ix. 1912 (*Robinson*).

LONCHAEIDAE.

LONCHAEA Fln.

- L. chorea** Fab. (incl. *L. vaginalis* Fln.). South Leverton, frequent; Treswell Wood (*Thornley*). Sherwood Forest near Ollerton (*L. A. Carr*). Mapperley and Sherwood Rise, Nottingham, in gardens, not uncommon (*Thornley* and *Carr*). Cotgrave (*Robinson*). Taken from May 10th to August 8th.
- L. palposa** Zett. South Leverton, 13. vii. 1901 (*Thornley*).

PALLOPTERA Fln.

- P. saltuum** L. Roe Wood, Winkburn, 25. vii. 1915.
- P. ustulata** Fln. South Leverton, ♀, Sept. 1896; Mapperley, Nottingham, on window of house, 16. ix. 1907, and in garden, 7 and 9. vii. 1915, common (*Thornley*). Linby, 18. ix. 1912 (*Robinson*). Bulwell Hall Park, 8. vii. 1912; Sherwood, Nottingham, 11. vii. 1913.
- P. umbellatarum** Fab. Sherwood Forest near Ollerton, common, June 1914 (*L. A. Carr*). In garden at Mapperley, Nottingham, 27. vi. and 9. vii. 1915 (*Thornley*). Aspley Woods, 4. vii.; Bulwell Hall Park, 8. vii.—1912; near Park Drain station, Misson, 22. ix. 1914.
- P. trimacula** Mg. South Leverton, May 1896 and 1899; Saundby, 14. vi. 1901 (*Thornley*). Sherwood Forest (*Wainwright*). Papplewick, 1. vi.; Arnold, 4. vi.; East Bridgford, 11. vi.—1914 (*Robinson*). Stapleford, ♀ ♀, 24. v. 1914 (*Saunt*). Crow Wood Hill, West Leake, 27. v. 1913; Cuckney Hay Wood, 19. vi.; Lambley, 22. v.—1915 (*Carr*). Arnold, 10 and 17. vi. 1915 (*Robinson*).
- P. arcuata** Fab. South Leverton, ♂ ♀ ♀, May 1896; Saundby, 15. vi. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi.; Aspley Woods, 9. viii.—1912; Nottingham, 9. vi. 1913.
- P. muliebris** Harr. Kingston-upon-Soar, on windows of Agricultural College, 2. viii. 1904, 29. viii. 1907, and 20. viii. 1915; on windows in Nottingham, 13. ix. 1907 and 6. viii. 1912 (*Thornley*). Sherwood Rise and Sherwood, Nottingham, in gardens, 12. viii. 1912, 21 and 29. viii. 1915.

SAPROMYZIDAE.

MINETTIA Desv.

- M. longipennis** Fab. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

- M. lupulina** Fab. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913.
- M. fasciata** Fln. Crow Wood Hill, West Leake, 24. vii. 1912.
- M. inusta** Mg. (*M. spectabilis* Lw.). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913 (*Carr*). Mapperley, Nottingham, in garden, 21. vii. 1912 (*Thornley*).

SAPROMYZA Fln.

- S. affinis** Zett. The Dumbles, Kirkby-in-Ashfield, 28. vi.; Sherwood, Nottingham, 13. vi.—1913.
- S. decempunctata** Fln. Mapperley, Nottingham, in garden, 9 to 29. vii. 1915 (*Thornley*).
- S. pallidiventris** Fln. Sherwood Forest near Ollerton, July 1912, and near Edwinstowe, 30. viii. 1912.
- S. obsoleta** Fln. Radcliffe-on-Trent, 25. v. 1912 (*Thornley and Carr*). Mapperley, Nottingham, common in July, 1915 (*Thornley*).
- S. rorida** Fln. Sherwood Forest near Edwinstowe, 12. vi.; Aspley Woods, 18. v. and 4. vii.; Radcliffe-on-Trent, 25. v. and 10. vii.—all 1912 (*Carr*). Bulwell, 6. vii. 1912 (*Robinson*). Sherwood Rise and Mapperley, Nottingham, 8. v. and 24. vi. 1912, 28. vi. and 11. vii. 1915; Crow Wood Hill, West Leake, 14. vi. 1913 (*Thornley and Carr*).
- S. praeusta** Fln. Nottingham, 30. vi.; Aspley Woods, 4. vii.; Radcliffe-on-Trent, 25. v.; East Leake, 11. viii.; West Leake, 10 and 14. viii.—all 1912; Crow Wood Hill, West Leake, common, 14. vi. 1913 (*Carr*). Roe Wood, Winkburn, 26. vii. 1915 (*Thornley and Carr*).
- S. decipiens** Lw. Near Newbound Mill, Teversall, 3. viii. 1912.
- S. anisodactyla** Lw. Sherwood Rise, Nottingham, in garden, 22. vi. to 3. vii. 1912.

LAUXANIA Latr.

- L. aenea** Fln. South Leverton, ♂ ♀, 1894 (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton, June 1912-14; Thorney, Aug. 1913 (*L. A. Carr*). Radcliffe-on-Trent, by the river, 25. v. 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Park Drain, Misson, common, 22. ix. 1914; Nottingham, July 1915 (*Thornley and Carr*). West Leake Hills, 21. viii. 1913.

SEPSIDAE.

SEPSIS Fln.

- S. violacea** Mg. South Leverton, one ♂, 1894 (*Thornley*).
Worksop (*Houghton*). Thorney, August 1913 (*L. A. Carr*).
- S. cynipsea** L. Worksop (*Houghton*). South Leverton, common by sweeping hedgerows in vicarage garden, 18. iv. 1898; West Leake Hills, in myriads, settling thickly on grass-blades, etc., 5. viii. 1906; Kingston-upon-Soar and Gotham, 8. viii. 1912 (*Thornley*). Sherwood Forest, Edwinstowe, 30. viii.; Nether Langwith, 19. viii.; near Newbound Mill, Teversall, 3. viii.; Radcliffe-on-Trent, common, 10. vii.; East Leake, 19. vi.—all 1912; Nottingham, 28. iv. 1900, 7. vii. 1912, etc.; Crow Wood Hill, West Leake, in countless numbers, blackening the leaves of bushes, 9. viii. 1914; Roe Wood, Winkburn, 26. vii. 1915.
- S. nigripes** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). 'Mapperley Edge,' Sherwood, Nottingham, in flowers of *Crocus*, 13—15. iii. 1915; Crow Wood Hill, West Leake, 9. viii. 1914 (*Carr*). Cotgrave, 23. x. 1913 (*Robinson*).

NEMOPODA Desv.

- N. cylindrica** Fab. South Leverton (*Thornley*). Sherwood Forest near Ollerton, June 1914; Thorney, Aug. 1913 (*L. A. Carr*). Near Newbound Mill, Teversall, 26. vi.; Crow Wood Hill, West Leake, 14. vi.—1913 (*Carr*). Stapleford, 24. v. 1914 (*Saunt*). Bagthorpe, Nottingham, 17. vi. 1909 (*Robinson*).
- N. stercoraria** Desv. Garden, Mapperley, Nottingham, 7. vii. 1915, and abundant at Kingston-upon-Soar in August (*Thornley*).

HENICITA Westw.

- H. annulipes** Mg. Aspley Woods near Nottingham, 26. vii. 1912; near Park Drain station, Misson, 22. ix. 1914.

THEMIRA Desv.

- T. putris** L. Mapperley, Nottingham, 20. vii. 1913 and July and August 1915; Kingston-upon-Soar, August 1912 (*Thornley*). Radcliffe-on-Trent, 24. ix. 1914 (*Robinson*).

SALTELLA Desv.

S. sphondylii Schrk. Aspley Woods, ♂ ♀, 27. vi.; East Leake, 9. vi.—1912.

S. nigripes Desv. East Leake, 19. v. 1912.

PIOPHILA Fln.

P. casei L. South Leverton, 11. vi. 1900; Kingston-upon-Soar, abundant (*Thornley*). Nottingham, common.

P. varipes Mg. Mapperley, Nottingham, Sept. 1914 (*Thornley*). East Leake, 9 and 19. vi. 1912; Crow Wood Hill, West Leake, 24. vii. 1912.

P. nigriceps Mg. Nottingham, 14. vi. 1914; East Leake, 9 and 19. vi. 1912, common.

GEOMYZIDAE.**ANTHOMYZA** Fln.

A. gracilis Fln. Sherwood Forest near Ollerton, June 1914; near Newbound Mill, Teversall, 26. vi. 1913.

PARANTHOMYZA Czerny.

P. nitida Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

BALIOPTERA Lw.

B. tripunctata Fln. Sherwood Forest near Edwinstowe and Ollerton, June 1912-14 (*L. A. Carr*). Cotgrave, 23. x. 1913 (*Robinson*). Attenborough, 14. viii. 1913; East Leake, 10. iv. 1915.

B. combinata L. Treswell Wood, 15. vi. 1901 (*Thornley*). Edwinstowe and Ollerton, Sherwood Forest, 12. vi. 1912, etc.; Aspley Woods, 28. viii.; Barton, 27. vii.—1912; Warsop, 14. vii.; Epperstone Park, 6. ix.—1913.

OPOMYZA Fln.

O. germinationis L. South Leverton; Treswell Wood (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton; Cuckney Hay Wood, Nether Langwith; near Newbound Mill, Teversall; Linby; Langford Moor; Nottingham;

Aspley Woods; Crow Wood Hill, West Leake (*Carr*).
Cotgrave (*Robinson*). Common: my records extend from
June 4th to September 18th.

CHIROMYIA Desv.

C. flava L. South Leverton, ♀, 1894; Mapperley, Nottingham,
9. vii. 1915 (*Thornley*).

EPHYDRIDAE.

NOTIPHILA Fln.

N. nigricornis Stenh. Trent-bank, Attenborough, 27. vii. 1912.

N. riparia Mg. Bulwell Forest, 21. vii. 1913.

N. cinerea Fln. Bagthorpe, Nottingham, 18. vii.; Radcliffe-
on-Trent, 29. v. and 10. vii.—1912; Bulwell Forest, 21. vii.
1913; Sherwood Forest near Ollerton, June 1914.

HYDRELLIA Desv.

H. griseola Fln. South Leverton; Treswell Wood, 29. v. 1900
(*Thornley*). Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*). Aspley Woods, 18. v.; Bulwell Hall Park,
8. vii.—1912; Nottingham, 13. vi.; Gedling, 12. vi.;
Radcliffe-on-Trent, 21. vi.; Crow Wood Hill, West Leake,
14. vi.; the Dumbles, Kirkby-in-Ashfield, 28. vi.—all 1913.

H. ranunculi Hal. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

OCHTHERA Latr.

O. mantis De G. South Leverton, 14. v. 1901 (*Thornley*).

PARHYDRA Stenh.

P. quadripunctata Mg. Radcliffe-on-Trent, 21. vi. 1913.

P. aquila Fln. Papplewick, 3 specimens, 9. x. 1913 (*Robinson*).

P. coarctata Fln. Gedling, 12. vi.; marshy ground near
Newbound Mill, Teversall, 26. vi.—both 1913.

SCATELLA Desv.

S. quadrata Fln. South Leverton, 4. v. 1898 (*Thornley*).

- S. sorbillans** Hal. Sherwood, Nottingham, 4. vi.; Gedling, 12. vi.; Radcliffe-on-Trent, very common, 21. vi.—all 1913.

DROSOPHILIDAE.

SCAPTOMYZA Hardy.

- S. graminum** Fln. Sherwood Forest near Edwinstowe, 30. viii. 1912, and near Ollerton, June 1914; Sherwood and Mapperley, Nottingham, 17. ix.; Bulwell Forest, 8. viii.—1912.

DROSOPHILA Fln.

- D. fenestrarum** Fln. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Nottingham, 29. iii. 1912 (*Thornley*). Clifton Grove, 17. iv. 1915 (*Robinson*).
- D. funebris** Fab. South Leverton (*Thornley*). Nottingham, 17. ix. 1912 (*Carr*), and 20. vi. 1913 (*Robinson*).

CAMILLA Hal.

- C. glabra** Fln. Sherwood Forest near Edwinstowe, 12. vi. 1912.

CHLOROPIDAE.

MEROMYZA Meig.

- M. pratorum** Mg. Cottam, common by sweeping grass, 12. vii. 1899; Treswell Wood, 5. viii. 1901 (*Thornley*). Crow Wood Hill, West Leake, 24. vii. 1912; Linby, 29. vii. 1914.
- M. saltatrix** L. East Leake, 4. viii. 1914; specimens from Bulwell Forest, 21. vii. 1913, have pale palpi, but otherwise agree with typical *saltatrix* (*Carr, teste Lamb*).
- M. variegata** Mg. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*C. Morley*).
- M. nigriventris** Meq. East Leake, 9. vi. 1912.
- M. laeta** Mg. Cottam, by sweeping grass, 12. vii. 1899; Kingston-upon-Soar, 10. viii. 1914; Rempstone, 15. vii. 1915 (*Thornley*). Linby, 18. ix. 1912; Plumtree, 4. viii. 1914 (*Robinson*). West Leake, 6. ix. 1907 and 24. vii. 1912; Bulwell Forest, 21. vii.; Attenborough, 14. viii.; Fiskerton, 25. vii.; Upton near Southwell, 30. vi.—all 1913; East Leake, 4. viii. 1914.

CENTOR Lw.

- C. myopinus** Lw. Bagthorpe, Nottingham, 18. vii.; Bulwell Forest, 2. viii.; Radcliffe-on-Trent, 10. vi.—all 1912 (*Carr*).
Bassingfield near Gamston, 2. vii. 1914 (*Robinson*).
- C. nudipes** Lw. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*C. Morley*).

ANTHRACOPHAGA Lw.

- A. strigula** Fab. Sherwood Forest near Edwinstowe, 10. viii.; Cuckney Hay Wood, Nether Langwith, 11. viii.—1914 (*C. Morley*).
- A. frontosa** Mg. Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley*).

CHLOROPS Meig.

- C. taeniopus** Mg. South Leverton, May 1896; Mapperley, Nottingham, 5. viii. 1912 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi. 1912 and 10. viii. 1914; Aldercar Wood, Newstead, 13. viii. 1914; East Leake, 9. vi. 1912 and 4. viii. 1914 (*Carr*). Thorney, August 1913 (*L. A. Carr*). Arnold, 4. vi.; Bulwell and Watnall, 28. v.—1914 (*Robinson*).
- C. speciosa** Mg. Treswell Wood, 21. vii. 1897 and 15. vi. 1901; Kingston-upon-Soar (*Thornley*). Thorney, Aug. 1913 (*L. A. Carr*). Edwinstowe, Sherwood Forest, 12. vi. 1912 and 10. viii. 1914; Aspley Woods, 27. vi.; East Leake, 9. vi.; Linby, 18. ix.—all 1912; the Dumbles, Kirkby-in-Ashfield, 28. vi.; Upton near Southwell, 30. vi.; near Newbound Mill, Teversall, 26. vi.; Sherwood, Nottingham, 17. vii.; Bulwell Forest, 21. vii.; Fiskerton, 25. vii.—all 1913.
- C. laeta** Mg. South Leverton, May 1896 (*Thornley*).
- C. hypostigma** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Sherwood, Nottingham, on hawthorn, 17. vii. 1913; Aspley Woods, 9. viii.; East Leake, 9. vi.—1912 (*Carr*). East Bridgford, 11. vi. 1914 (*Robinson*).
- C. interrupta** Mg. Crow Wood Hill, West Leake, 14. vi. 1913 and 8. ix. 1914.
- C. nigrithorax** Strobl. Marshy ground near Newbound Mill, Teversall, 26. vi.; the Dumbles, Kirkby-in-Ashfield, 28. vi.—1913.

CHLOROPISCA Lw.

- C. circumdata** Mg. Nottingham, very common in my garden at 'Mapperley Edge,' Sherwood, 13. vi. 1913, 24. iii., 28 and 29. iv. 1915 (*Carr*). Cuckney Hay Wood, Nether Langwith, 11. viii.; Langford Moor, 14. viii.—1914 (*Morley*). Nuthall, 15. iv. 1915 (*Robinson*).
- C. glabra** Mg. Nottingham, in gardens at Sherwood Rise (22. vi. 1912) and Sherwood, 13 to 19. vi. 1913.
- C. rufa** Mcq. (?) Sherwood, Nottingham, 18. vi. 1912.

OSCINIS Latr.

- O. frit** L. Kingston-upon-Soar, 27. vii. 1905 (*Thornley*).

SIPHONELLA Mcq.

- S. laevigata** Fln. South Leverton, two specimens, 1. v. 1899, one on 21. iv. 1901, and in numbers on a window of the vicarage, 20. v. 1901 (*Thornley*).

ELACHYPTERA Mcq.

- E. cornuta** Fln. Sherwood Forest near Ollerton June 1914 (*L. A. Carr*). Nottingham, 24. iii. 1915 (*Thornley*). Nuthall, 15. iv. 1915 (*Robinson*). Nottingham, 28-29. iv.; Roe Wood, Winkburn, 13. iv.; Crow Wood Hill, West Leake, 10. iv.—all 1915.

OCHTHIPHILIDAE.**OCHTHIPHILA** Fln.

- O. polystigma** Mg. Treswell Wood, 29. v. 1900 (*Thornley*).

MILICHIDAE.**MEONEURA** Rond.

- M. obscurella** Fln. (?) South Leverton, common: larvae feeding in holly leaves (*Thornley*).

MADIZA Fln.

- M. glabra** Fln. South Leverton (*Thornley*). Bulwell Forest, 8. viii. 1912.

AGROMYZIDAE.

AGROMYZA Fln.

- A. laterella** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
A. scutellata Fln. Sherwood Forest near Edwinstowe, 10. viii. 1914.
A. curvipalpis Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

CERODONTA Rond.

- C. denticornis** Panz. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

BORBORIDAE.

BORBORUS Meig.

- B. nitidus** Mg. South Leverton, ♂♂, May 1896 (*Thornley*). Aspley Woods, 18 and 28. v. 1912 (*Carr*). Bulcote Wood, 16. x. 1913 (*Robinson*).
B. niger Mg. South Leverton, Sept. 1897 and 17. iv. 1898 (*Thornley*). Garden at 'Mapperley Edge,' Sherwood, Nottingham, 29. iv. 1915.
B. longipennis Hal. Roe Wood, Winkburn, 13. iv. 1915.
B. vitripennis Mg. South Leverton, one in 1894 (*Thornley*).
B. equinus Fln. South Leverton, 29. i. 1898 (*Thornley*). Sherwood Forest near Ollerton; near Newbound Mill, Teversall; Linby; Nottingham; Aspley Woods; Burton Joyce; Bingham; East and West Leake; Radcliffe-on-Trent; etc. (*Carr*). Basford; Nuthall; Papplewick; Lambley; Clifton Grove; Gamston; Cotgrave (*Robinson*). Taken from January to October.
B. nigrofemoratus Mcq. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, 10. iv. 1915.
B. geniculatus Mcq. South Leverton, 7. iv. 1898 (*Thornley*). Bilborough, 13. vii. 1911 (*Robinson*). East Leake, 11. viii; Linby, 18. ix.—1912; Radcliffe-on-Trent, 21. vi.; near Newbound Mill, Teversall, 26. vi.; Upton near Southwell, 30. vi.—1913; Park Drain, Misson, 22. ix. 1914; Crow Wood Hill, West Leake, 10. iv. 1915.

SPHAEROCERA Latr.

- S. subsultans** Fab. South Leverton, one, May 1896; Mapperley, Nottingham, common in garden, 17. iv. 1912 (*Thornley*). Sherwood Forest near Edwinstowe, 12. vi.; Radcliffe-on-Trent, 29. v.; East Leake, 9. vi.—1912; Nottingham, in gardens at Sherwood Rise and Sherwood, 24. iv. to 8. vi. 1913, and 29. iv. 1915 (*Carr*). Thorney, August 1913 (*L. A. Carr*).
- S. denticulata** Mg. Nottingham, common in garden at 'Mapperley Edge,' Sherwood, 29. iv. 1915.
- S. pusilla** Fln. Nottingham, garden on Woodborough Road, 24. iii. 1913 (*H. Hillman*).

LIMOSINA Meq.

- L. fontinalis** Fln. Burton Joyce, 12. iii. 1913 (*Robinson*). Garden, Woodborough Road, Nottingham, 24. iii. 1913 (*H. Hillman*). Garden, 'Mapperley Edge,' Sherwood, Nottingham, 28. iv. 1915.
- L. lutosa** Stenh. Radcliffe-on-Trent, 24. ix. 1914; Gamston, 28. iv. 1915 (*Robinson*).
- L. limosa** Fln. Burton Joyce, 12. iii. 1913 (*Robinson*). Gedling, several specimens, 12. vi. 1913.
- L. pumilio** Mg. Gedling, two specimens, 12. vi. 1913.
- L. sylvatica** Mg. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Burton Joyce, 12. iii.; Bulcote Wood, 16. x.—1913 (*Robinson*). Nottingham, in gardens at Sherwood Rise and Sherwood, 5. xii. 1912, 13. v. 1914, and 29. iv. 1915; East Leake, 10. iv. 1915; near Newbound Mill, Teversall, 26. vi. 1913.
- L. erratica** Hal. A variety of this species taken in Sherwood Forest near Ollerton, June 1914 (*L. A. Carr teste Collin*). (?) Garden at Sherwood, Nottingham, 29. iv. 1915.
- L. crassimana** Hal. Aspley Woods, 18. v. 1912 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- L. spinipennis** Hal. Garden, 'Mapperley Edge,' Sherwood, Nottingham, 29. iv. 1915.

PHORIDAE.

TRINEURA Meig.

- T. aterrima** Fab. South Leverton; Mapperley, Nottingham, 3. vi. 1912 (*Thornley*). Sherwood Forest near Ollerton,

June 1914 (*L. A. Carr*). Cinder-hill, 19. vi. 1913 (*Robinson*).
North Collingham, 25. viii. 1913.

PHORA Latr.

P. thoracica Mg. Aspley Woods, 11. vi. 1912.

P. concinna Mg. East Leake, common, 9. vi.; West Leake,
23. vi.—1912 (*Carr*). Nottingham, 15. vi. 1912 (*Robinson*).

P. incrassata Mg. North Collingham, 25. viii. 1913.

APHIOCHAETA Brues.

A. umbrimargo Beck. Sherwood Forest near Ollerton, June
1914 (*L. A. Carr*).

A. rata Coll. Four specimens bred from larvae which came
out of the body of a *Thanasimus fornicarius* collected in
Sherwood Forest in July 1908 (*Donisthorpe*).

A. campestris Wood. Sherwood Forest near Ollerton, June
1914 (*L. A. Carr*).

A. conformis Wood. Aspley Woods, 18. v. 1912.

A. pleuralis Wood. Sherwood Forest near Ollerton, several,
June 1914 (*L. A. Carr*).

A. lutea Mg. (?) Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

A. tumida Wood. Sherwood Forest near Ollerton, June 1914
(*L. A. Carr*).

A. angusta Wood. Sherwood Forest near Ollerton, June
1914 (*L. A. Carr*).

A. rufipes Mg. South Leverton, abundant, 30. i., 10. ii., 2
and 17. iii., 7. v.—1898; Mapperley, Nottingham, many
specimens bred from a dead *Helix pomatia*, 29. v., etc.,
1915 (*Thornley*). Nottingham, on windows at 'Mapperley
Edge,' Sherwood, 6. iii. 1915 (identification not quite
certain).

A. pectoralis Wood. Nottingham, 13. iii. 1914.

HIPPOBOSCIDÆ.

ORNITHOMYIA Latr.

O. avicularia L. Nottingham, rather common on starlings.
Worksop (*Hodding*). Shireoaks, Worksop, a specimen taken

off a little-owl, 30. xi. 1912 (*Houghton*). Wigsley, several in farm-house, 20. vii. 1915.

STENOPTERYX Leach.

S. hirundinis L. Common in nests of house-martin at Lowdham in the first week of September 1912.

OXYPTERUM Leach.

O. pallidum Leach, Nottingham, seven specimens taken off a swift, 14. vi. 1907, and one, also from a swift, in 1912.

MELOPHAGUS Latr.

M. ovinus L. South Leverton, common on sheep (*Thornley*). Aspley near Nottingham, common on sheep, 28. v. 1912. Doubtless common everywhere.

SIPHONAPTERA (*Fleas*).

Fleas are insects of characteristic shape, the body being strongly compressed or flattened from side to side. Wings are entirely absent, but the legs are specially adapted for leaping. The head is small and not clearly marked off from the rest of the body: it bears short thick antennae placed in depressions above and behind the minute simple eyes: the mouth parts are adapted for piercing and sucking.

The metamorphosis is complete. The larvae are white legless grubs of elongated form and active habits; they feed upon almost any kind of refuse or waste matter of animal origin, and pupate in a silken cocoon. The adult fleas are parasitic on birds or mammals, whose blood they suck.

The Order Siphonaptera as defined by Rothschild is divided into two Sub-orders, (1) the *Integricipita*, comprising those species in which the frons, or anterior portion of the head, does not overlap the occiput, or posterior part, dorsally, and (2) the *Fracticipita* including those in which the frons does overlap the occiput dorsally. The British species are distributed among five families.

Forty-five species are described by the Hon. N. Charles Rothschild in his *Synopsis of the British Siphonaptera* (*Entom. Mo. Mag.*, March 1915), and seventeen of these have been taken in Nottinghamshire, while many others doubtless occur. The

Rufford specimens were collected for me by a keeper on the Rufford estate, through the kind intervention of the late Rev. W. Becher. All the Nottinghamshire specimens have been identified by the Hon. N. C. Rothschild.

INTEGRICIPITA.

PULICIDAE.

PULEX L.

P. irritans L. Common and universally distributed in human habitations, and also found on domestic animals (dog, cat, etc.).

ARCHAEOPSYLLA Dampf.

A. erinacei Bouché. Grove near Retford, April 1900, from hedgehog (*Rev. G. Shipton*). Rufford, very common on hedgehogs, also found on dog and weasel, Aug. and Sept. 1909 and 19. v. 1913; Mapperley, Nottingham, on hedgehog, Aug. 1912.

SPILOPSYLLUS Baker.

S. cuniculi Dale. Rufford, infesting rabbits and hares in abundance, Aug. and Sept. 1909 and 24—30. vi. 1913.

CERATOPHYLLIDAE.

CERATOPHYLLUS Curt.

C. styx Roths. From nest of sand martin in bank of River Trent opposite Sneinton, Nottingham, 16. vii. 1912.

C. hirundinis Curt. Lowdham, from nest of house martin, 5. ix. 1912: also many bred from same nest, 3. vi. 1913.

C. rusticus Wagn. Bred in considerable numbers, 3. vi. 1913, from nest of house martin taken at Lowdham in Sept. 1912.

C. farreni Roths. From nests of house martin, Gotham, July and August, 1912, and Lowdham, 5. ix. 1912.

C. garei Roths. Rufford, from pheasant, partridge, red-legged partridge and stoat, May and June, 1913.

- C. gallinae** Schrk. South Leverton, swarming in old fowl-house, 4. x. 1899 (*Thornley*). Wollaton from little-owl, Aug. 1912; Rufford, from fowl, 27. v. 1913, and from stoat, 12. vi. 1913.
- C. sciurorum** Schrk. Nottingham, from squirrel, 4. i. 1904; Rufford, from squirrel, weasel and stoat, 1909 and 1913.
- C. walkeri** Roths. Rufford, from weasel and stoat, 1909.

CTENOPHTHALMUS Kolen.

- C. agyrtes** Heller. Sherwood, Nottingham, many specimens from a mouse, 24. iv. 1913.

FRACTICIPITA.

LEPTOPSYLLIDAE.

PALAEOPSYLLA Wagn.

- P. minor** Dale. Grove near Retford, from mole, March 1900 (*Rev. G. Shipton*). Rufford, from mole, 1909, and 15. ix. 1913: also from cat; Bramcote, from mole. 10. vi. 1912.
- P. kohauti** Dampf. Two specimens of this very rare species were taken from a mole caught at Rufford in 1909.

LEPTOPSYLLA Jord. and Roths.

- L. musculi** Dugès. Nottingham, from house-mouse, 7. viii. 1912; Rufford, from mouse, 17. ix. 1913: from dog, 1909: from cat, 15. ix. 1913.

HYSTRICHOPSYLLIDAE.

HYSTRICHOPSYLLA Taschb.

- H. talpae** Curt. Rufford, from mole, 1909, and 15. ix. 1913.

ISCHNOPSYLLIDAE.

ISCHNOPSYLLUS West.

- I. hexactenus** Kolen. Rufford, from bat, 1909.

HYMENOPTERA.

The Order Hymenoptera is one of enormous extent, comprising the ants, bees and wasps, saw-flies, gall-flies, ruby-wasps, ichneumons, etc. They possess two pairs of membranous wings which are destitute of scales and more or less transparent; the anterior wings are larger than the posterior. Along the front margin of each hind wing is a row of tiny hooks which catch on to the folded hind margin of the corresponding fore wing, so that the two wings of each side are firmly joined together during flight. In many Hymenoptera, however, one or both of the sexes are wingless. Mandibles, adapted for biting, are always present. The females are in some families provided with a sting, in others with a sawing, boring, or piercing apparatus. In the sawflies the abdomen is broad at the base where it joins the thorax, and there is no sharp distinction between the two regions, the lateral outline of the body being therefore continuous; but in the other groups the base of the abdomen is suddenly contracted into a slender 'waist' or petiole of varying length in different species. These differences are utilized as a means of dividing the Order into two Sub-orders: the *Chalastogastra*, in which the thorax passes almost imperceptibly into the abdomen, and the *Clistogastra* or *Petiolata*, in which there is a deep constriction between them, and the transition is therefore abrupt and sharply defined.* This difference in structure is accompanied by striking differences in the mode of life of the insects in the two groups. The *Chalastogastra* or Sawflies are vegetable feeders; the larvae mostly resemble the caterpillars of Lepidoptera, and usually feed exposed on the foliage of plants. Those of the *Clistogastra* are maggot-like and incapable of obtaining food by their own exertions; a large proportion of them are carnivorous, living as parasites in the bodies of other insects. The hymenopterous pupa is free, *i.e.* the appendages are not fixed to the body.

A remarkable feature in the economy of the Hymenoptera is the frequent occurrence of parthenogenesis, *i.e.* the production of young by the female insect without the co-operation of a male. While in some cases it may be of only occasional occurrence, in others, although intermittent, it occurs regularly, and still other species are apparently perpetually parthenogenetic. Thus

* The expressions 'thorax' and 'abdomen' are here used in a somewhat loose sense. In the Petiolate Hymenoptera the first segment of the abdomen is completely fused with the thorax, and the 'waist' or stalk is formed by the second (and sometimes the third) abdominal segment. The petiole or constriction is therefore, strictly speaking, not between the thorax and abdomen, but behind the first segment of the latter.

in many of the Gall-flies (Cynipidae) a parthenogenetic generation alternates regularly with a sexual one, and in a few Tenthredinidae and Cynipidae the male insect is entirely unknown, all the individuals belonging to the female sex, so that reproduction must be entirely parthenogenetic, and the progeny always wholly female. In some Cynipidae, although the male is very rare it is occasionally produced, but is probably useless, the virgin females being able to dispense with the assistance of a male. On the other hand in some cases of parthenogenesis the progeny is entirely male. The workers among the social ants, bees and wasps sometimes lay unfertilized eggs, and these always give rise to male individuals. The same thing occurs with the queen hive-bee before fertilization, and in some sawflies. In a few species of the latter group, however, while the parthenogenetic broods usually consist entirely of males, a female very occasionally appears.

Among the higher Hymenoptera (ants, some bees and wasps) a remarkable development of social life occurs, the individuals of a species living together in great societies consisting mainly of imperfect females or 'workers' who perform all the ordinary duties of the community; they construct, maintain, and defend the nest, and feed and tend the young. The work of reproduction is undertaken by a single perfect female known as the queen, or by a small number of such females, though in certain cases a few only of the workers may produce offspring which generally but not quite invariably is male. The males are short-lived, and of use only in the fertilization of the queens.

The Hymenoptera may be classified thus:—

- A. Sub-order CHALASTOGASTRA. Not a very extensive group: comprises the sawflies.
- B. Sub-order CLISTOGASTRA or PETIOLATA. A group of immense extent, subdivided into three series according to the number of joints in the legs, apparent number of segments in the abdomen, and the presence in the female of an ovipositor or a sting.
 - I. PARASITICA, including the families *Cynipidae*, *Proctotrypidae*, *Chalcididae*, *Ichneumonidae* and *Braconidae*.
 - II. TUBULIFERA, including the single family *Chrysidae*.
 - III. ACULEATA. This is further broken up into four Divisions, (1) *Heterogyna* or ants, (2) *Fossores* or solitary wasps, (3) *Diploptera* or wasps, and (4) *Anthophila* or bees, each division comprising a number of families.

The *Chalastogastra* or Sawflies are as a rule sluggish insects with a weak heavy flight which is not long sustained. They are fond of settling on flowers, especially *Umbelliferae*, and feed chiefly on pollen. They all possess in the female sex a pair of remarkable sawing or piercing instruments which are used to cut or bore into the tissues of plants in which the eggs are deposited. The larvae are exclusively vegetable feeders; a few, like *Cephus*, which feeds internally in stems of corn, and *Sirex*, which lives in the solid wood of trees, are white fleshy grubs, destitute of prolegs; a few others inhabit galls, or bore into fruits, or mine or roll up leaves; but the great majority are caterpillar-like, and feed exposed on plants. These have from six to eight pairs of prolegs in addition to the three pairs of thoracic legs, whereas a lepidopterous caterpillar never has more than five pairs of prolegs.

The larvae of some species of sawflies are at times very destructive to crops. *Pteronus ribesii* sometimes completely defoliates the gooseberry bushes in gardens, and the slimy slug-like larva of *Eriocampoides limacina* occasionally does much damage to pear and other fruit trees. I have not heard of any other species causing damage in Nottinghamshire.

Parthenogenesis is very prevalent in this group, as has been repeatedly proved by rearing larvae from unfertilized eggs laid in confinement by bred females. In nearly all the species females are much more numerous than males; indeed in some species males are very rare, and in others quite unknown. On the other hand the parthenogenetically developed individuals of *Pteronus ribesii* are almost always entirely male.

The list of Nottinghamshire sawflies comprises 140 species out of a total for Great Britain of nearly 400. *Tenthredopsis thornleyi* is interesting as having been founded by Pastor Konow on specimens collected by the Rev. A. Thornley in Nottinghamshire and Lincolnshire in May and June, 1897. All the species enumerated below have been determined by the Rev. F. D. Morice, to whom I am indebted for much kind help.

The *Cynipidae* or Gall-flies are very small hymenopterous insects, usually black or dark in colour, which according to their mode of life may be divided into three groups:—(i) those whose eggs are laid, and the resulting larvae feed, in the tissues of a living plant, the presence of the egg or larva usually resulting in the formation of a ‘gall’—a peculiar abnormal growth in the merismatic tissue of the plant, which has in all cases a definite form characteristic of the species. The succulent internal substance of the gall furnishes the larva with food. The oak-apple, marble gall, oak-spangle, and Robin’s pincushion or bedeguar

gall of the wild rose are familiar examples of such galls. (ii) Inquilines: uninvited guests which do not themselves originate galls, though their action tends to modify the normal gall, but lay their eggs in the galls formed by the members of the first group, the larvae feeding internally upon the substance of the gall. (iii) Parasites, which have similar habits to those of the ichneumon flies, living and feeding inside the bodies of other insects, chiefly aphides and the larvae of Diptera.

The Cynipidae are of special interest on account of their varying modes of reproduction. The parasitic forms are developed from eggs fertilized in the usual manner, and this is also true of some of the gall-makers and inquilines. In others, however, reproduction is partially or completely parthenogenetic, the individuals of some species consisting mainly, of others entirely, of females which produce fertile eggs without the co-operation of a male. But besides parthenogenesis some of the gall-making species exhibit the phenomenon of 'alternation of generations.' Such species have a spring brood consisting of males and females, reproducing sexually and giving rise to an autumnal agamic, unisexual, or wholly female brood which reproduces parthenogenetically and originates the bisexual brood of the following spring. The two generations frequently differ so materially in structural details, and moreover produce galls of such different form and structure, that they were formerly regarded as totally distinct species and received different names.

The appended list of the gall-making and inquiline Cynipidae of Nottinghamshire is due mainly to the researches of Mr. G. B. Rothera of Nottingham, who had the advantage of the co-operation of Mr. E. A. Fitch in the determination of the species. A large number of Cynipidae in the writer's collection still await identification.

The *Proctotrypidae* are small Hymenoptera, often wingless, whose larvae are parasitic in the bodies or even the eggs of other insects or of spiders. Little is known of them in Nottinghamshire, and very few of the species collected in the county have been determined.

The *Chalcididae* are a very large group of small Hymenoptera, often brilliantly coloured, and of parasitic habits. The larvae of many species inhabit galls, and feed on the larvae of the gall-makers or inquilines; others live in the nests of bees, whose grubs they devour; others attack the caterpillars or pupae of Lepidoptera, and some destroy aphides. Owing to the impossibility of getting one's captures named very few species can be recorded for the county, but much unidentified material exists in the writer's collection.

The Ichneumon-flies (*Ichneumonidae*) constitute an exceedingly large family of parasitic insects, most of them living in the larval stage inside the bodies of lepidopterous caterpillars. In common with the next family they are therefore of considerable economic importance, keeping in check the destroying hosts of vegetable-feeding caterpillars which might otherwise eat up the produce of our gardens and fields. The long, many-jointed antennae, the position of the stalked abdomen which arises from the lower part of the hind end of the 'thorax,' and of the middle and hind legs which are inserted close together, are distinguishing features of the insects of this family. The wings also have a characteristic and somewhat complex network of veins. The female possesses an ovipositor which in some species is several times as long as the body, as, e.g., in species of *Rhyssa* and *Thalessa* which are parasitic on the wood-boring grubs of *Sirex*. The small somewhat ant-like Ichneumons belonging to the genus *Pezomachus* are peculiar in being destitute of wings.

In his *Ichneumons of Great Britain*, just completed, Mr. Claude Morley describes 1517 British species, but in the *Catalogue of British Ichneumonidae* he enumerates 1523 species. The list given below comprises 434 species, all kindly identified by Mr. Morley, but a great many of my captures are still unnamed and cannot therefore be recorded.

The *Braconidae* form another very extensive family of parasitic Hymenoptera. They are closely allied to the Ichneumonidae both in structure and habits, the larvae inhabiting the bodies of larvae or pupae of other insects, especially butterflies and moths. Scarcely anything is known of these insects in Nottinghamshire, and only a very short list can be given, although plenty of unidentified material exists. Mr. Claude Morley kindly determined the recorded species.

Chrysididae (Ruby Wasps). The members of this comparatively small family are distinguished by the gorgeous colouration of their exceedingly hard coarsely-sculptured integument, the prevailing hues being brilliant metallic green, blue, and crimson. In spite of their rather small size they are therefore conspicuous objects as they fly rapidly about in the hot sunshine. The eggs are laid in the nests of bees and wasps, or in some cases of digging wasps, and the resulting larvae feed on the bee- or wasp-grubs. Of the twenty-one British species eight have so far been detected in the county.

Aculeata. The principal feature which separates the Aculeata from other Hymenoptera is the modification of the ovipositor into a retractile sting which is entirely hidden within

the abdomen when withdrawn. The larvae are soft legless grubs, either living under the protection of the adult insects or in cells constructed by them. The series comprises four divisions, viz., Heterogyna (ants), Fossores (solitary or digging wasps), Diptoptera (wasps), and Anthophila (bees).

The ants are characterized by the presence of one or two small nodular swellings between the 'thorax' and the 'abdomen' in the place of the simple petiole or stalk of other Petiolata. They live in extensive communities consisting of males, females, and workers or imperfectly developed females. The males and females are winged, but the workers—which are by far the most numerous—are wingless. After pairing the males die and the females cast their wings and devote themselves to egg-laying. The eggs and the helpless maggots hatched from them are tended by the workers, which feed the larvae and also the fertile females. The nests are made by the workers, and are irregular chambers connected by numerous galleries constructed underground, beneath stones, in rotten wood, etc. *Formica rufa*, occurring commonly in fir-woods, builds large mounds of twigs and pine-needles, often two feet high and a yard in diameter. The Heterogyna are not very well represented in Nottinghamshire only seven native and two introduced species being recorded. The Isopod crustacean or woodlouse *Platyarthrus hoffmannseggii* is common in many places in the nests of several species.

Among the fossorial Hymenoptera each species consists of male and female only; the larvae are carnivorous. The females construct nests by burrowing in sandy ground or in wood or plant-stems; in these burrows they lay up a store of food for the use of their offspring, consisting of spiders, aphides, larvae of Lepidoptera, Diptera, beetles, other Hymenoptera, etc.; these are usually not killed, but paralysed by being stung.

The Diptoptera or true wasps may be distinguished from the other groups by the anterior wings being longitudinally folded when at rest. Some species are solitary, consisting only of males and females, and build earthen nests which they provision with caterpillars. The species of *Odynerus* make their nests in holes in walls or woodwork, in plant-stems, or in burrows in the ground. *O. spinipes* burrows in clay banks and builds a beautiful projecting tubular approach to its nest. The Vespidae or social wasps live in communities consisting of males, females and workers. The nest is fashioned of paper manufactured by the wasps from the woody tissue of plants, and the 'comb' or mass of cells in which the larvae are reared is usually in several distinct layers or plates situated one above the other. The grubs are fed on insects or fruit, or both. In the autumn the males and workers die off, but the young fertile females

hibernate, and each founds a new nest in the following spring, lays eggs, and rears a brood of workers which add largely to the size of the nest and tend the succeeding broods of larvae. For long only workers are produced, but late in the summer males and perfect females are developed. We possess six of the eight British species of *Vespa* in Nottinghamshire. Of these *V. crabro*, the formidable hornet, is by far the rarest; indeed the only local specimen I have seen is one captured on the river bank at Ollerton by a man who was cutting the water weeds; it was taken by him to the Rev. W. Becher, who presented it to the Nottingham Museum. *Vespa sylvestris*, which generally suspends its nest from the branches of trees and bushes, is very common with us, and may often be seen in numbers at the flowers of the Water Betony (*Scrophularia aquatica*). *Vespa vulgaris*, *V. germanica* and *V. rufa*, which construct their nests underground, are all common.

The Anthophila or bees may in general be known from the other Aculeate Hymenoptera by the plumose or feathery hairs with which they are more or less clothed, by the flat and broad basal segment of the hind tarsus, and by the 'tongue' adapted for sucking nectar from flowers; moreover the abdomen is never narrowed at the base to form an elongated stalk as it so often is in the other groups. The majority of the Anthophila are solitary, but innumerable nests are frequently constructed in close proximity. Some years ago a soft sandstone road-cutting at Bagthorpe, Nottingham, exhibited over a considerable area many hundreds of the burrows of *Colletes daviesanus* to the square yard of surface. Some burrow in wood or excavate bramble stems, others construct nests of clay in cavities of walls or posts, or even utilize empty snail shells for the purpose. The writer has bred nearly fifty specimens of *Osmia rufa* from a door lock which was completely filled with the clay cells of this species. Some species live parasitically in the nests of other bees; thus *Epeolus productus* occurred in abundance with the *Colletes daviesanus* mentioned above, and the species of *Nomada* live at the expense of species of *Andrena* and *Eucera*. *Anthophora* acts as host to the parasitic *Melecta*, and *Coelioxys* is parasitic upon *Megachile* chiefly. The humble bees (*Bombus*) and the honey bee (*Apis mellifica*) are social, living in societies consisting of males, females and workers. *Psithyrus* is an 'unbidden guest' in the nests of *Bombus*.

For the arrangement and nomenclature of the Hymenoptera the undermentioned works have been followed:—

Chalastogastra. Morice, Help-notes towards the determination of British Tenthredinidae, etc. (*Ent. Mo. Mag.*, 1903—1915).

Cynipidae. Dalla Torre and Kieffer, Das Tierreich: Cynipidae.

- Proctotrypidae*. Marshall, Catalogue of British Hymenoptera : Oxyura (with changes necessitated by more recent research).
- Chalcididae*. Morley, Cat. of British Chalcididae (British Museum, 1910).
- Ichneumonidae*. Morley, Ichneumons of Great Britain, 5 vols., and Cat. of British Ichneumonidae, 1915.
- Braconidae*. Marshall, Monograph of British Braconidae (*Trans. Entom. Soc. London*, 1885—1899).
- Chrysididae*. Morice, Revision of British Chrysididae (*Ent. Mo. Mag.*, 1896, p. 117 ; and Synoptic Table, 1900, p. 129).
- Aculeata*. Saunders, Cat. of British Hymenoptera Aculeata, 1902.

CHALASTOGASTRA.

LYDIDAE.

PAMPILIUS Latr.

- P. balteatus** Fall. Crow Wood Hill, West Leake, ♂, 17. v. 1914.
- P. hortorum** Klug. Treswell Wood, ♀, 4. vi. 1900 (*Thornley*).
- P. depressus** Schrank. South Leverton (*Thornley*).
- P. silvaticus** L. South Leverton, ♂, June 1896 ; Treswell Wood, ♀, 4. vi. 1900 (*Thornley*).

CEPHIDAE.

MACROCEPHUS Schlecht.

- M. linearis** Schrank. Treswell Wood, ♂, 9. vi. 1900 (*Thornley*).

CEPHUS Latr.

- C. pallipes** Klug. Cinder-hill near Nottingham, ♀ ♀, 20. vi. 1912 and 19. vi. 1913 (*Robinson*). Sherwood Forest near Ollerton, ♂, July 1912 ; Crow Wood Hill, West Leake, ♂, 17. vi. 1914.
- C. pygmaeus** L. Common : sometimes abundant in buttercup flowers. South Leverton ; Treswell Wood (*Thornley*). Nuthall ; Cotgrave ; Gamston near Nottingham (*Robinson*). Cuckney Hay Wood, Nether Langwith ; Radcliffe-on-Trent ; Widmerpool, abundant ; East and West Leake. Taken from May 29th to July 2nd.

JANUS Steph.

J. cynosbati L. Crow Wood Hill, West Leake, ♀, 2. vi. 1913.

CALAMEUTA Knw.

C. filiformis Ev. Sherwood Forest near Edwinstowe, two ♂♂, 12. vi. 1912.

SIRICIDAE.

SIREX L.

S. gigas L. The larvae of this and other species of *Sirex* bore into solid timber and so get carried about with it from place to place; most, if not all, of our specimens may thus have been introduced, possibly from abroad. Has occurred frequently in Worksop (*Lady Robinson*). South Leverton; Rampton; Huthwaite, in coal-pit (*Thornley*). Wellow (*Rev. W. Becher*). Occurs in Nottingham every year; is sometimes quite common at Wollaton, in plantations by the saw-mills; Ollerton; Newstead; Attenborough; Plumtree; etc. Occurs in July and August: all the specimens I have seen are females.

S. noctilio Fab. Worksop (*Lady Robinson, Houghton*). Stapleford, 1914 (*J. Dawson*). Chilwell (*D. H. Pearson*). Nottingham, on several occasions; Nuthall Temple, 1914. August and September.

TENTHREDINIDAE.

TRICHIOSOMA Leach.

T. lucorum L. South Leverton (*Thornley*). Sherwood Forest (*Becher*). Langford Moor near Newark, bred from larva found on birch (*Saunt*). Bulwell Forest, bred from larva on birch. All the recorded specimens were males, and occurred in April.

T. tibialis Leach. South Leverton, May 1896; Newark, larvae on hawthorn, 27. vi. 1908 (*Thornley*). Mansfield, ♀, 1. vi. 1913 (*Saunt*). Sherwood Forest, 6. vi. 1882 (*R. C. Bradley*).

ARGE Schr.

A. enodis L. Treswell Wood, one ♀, 4. vi., one ♂, 9. vi., 1900 (*Thornley*).

- A. ustulata** L. South Leverton, ♂ ♀, 18. v. 1901 (*Thornley*).
Widmerpool, ♂, 23. vi. 1900; Crow Wood Hill, West Leake,
♀, 2. vi. 1913.
- A. fuscipes** Fall. Sherwood Forest, 7. vi. 1892 (*R. C. Bradley*).
- A. cyanocrocea** Först. Bagthorpe, Nottingham, ♀, 19. vi.
1900; Radcliffe-on-Trent, ♂, 29. v. 1912; East Leake,
both sexes not uncommon, 26. v. and 9. vi. 1912 and 2. vi.
1915; Crow Wood Hill, West Leake, ♂ ♂ ♀ ♀, 2. vi. 1913
and 19. v. 1914.

CLADIUS Ill.

- C. pectinicornis** Fourc. South Leverton; Treswell Wood;
Kingston-upon-Soar (*Thornley*). Calverton (*Saunt*).
Thorney; Cuckney Hay Wood, Nether Langwith; near
Newbound Mill, Teversall; Upton near Southwell; Car
Colston; Gotham; East and West Leake; Widmerpool.
Both sexes have occurred pretty freely and at various dates
from April 11th to August 21st.

TRICHIOCAMPUS Htg.

- T. viminalis** Fall. Both sexes bred from larvae on willows in
St. Mary's churchyard, Nottingham, 1912 (*Saunt*).
- T. drewseni** Thoms. Attenborough, ♂, 14. viii. 1915 (*Carr*).
A somewhat doubtful ♂ from Flawford near Plumtree, 24.
viii. 1913 (*Saunt*).
- T. eradiatus** Htg. Attenborough, two ♂ ♂, and a ♀ probably
of the same species, 8. vi. 1915; Car Colston, ♂, 11. iv.
1912; East Leake, ♂ ♀, 2. vi. 1913; Crow Wood Hill,
West Leake, ♂ ♀, 17. v. 1914.

PRIOPHORUS Latr.

- P. padi** L. South Leverton, ♂ ♂, May and June 1896
(*Thornley*). Gamston near Nottingham, ♂, 2. vii. 1914
(*Robinson*). Flawford near Plumtree, ♀, 9. viii. 1914
(*Saunt*). Linby, ♀, 29. vii. 1914; near Newbound Mill,
Teversall, ♂, 25. v. 1915; Attenborough, ♀, 14. viii. 1915;
North Collingham, ♀, 25. viii. 1913; East Leake, ♂, 19.
vi. 1912, and ♂ ♀, 2. vi. 1915; Crow Wood Hill, West
Leake, ♂ ♂ ♀ ♀, 17 and 19. v. 1914.

DINEURA Dahl.

- D. stilata** Klug. Tollerton, ♀, 22. v. 1913 (*Robinson*). East

Leake, ♂, 26. v. 1912: ♂ ♀, 25. v. 1913: ♂ ♂, 2. vi. 1915;
West Leake, ♂, 19. v. 1914; Attenborough, ♂, 5. vi. 1915.

CRYPTOCAMPUS Htg.

C. ater Jur. Near Newbound Mill, Teversall, 26. vi.; Attenborough, 14. viii.—1913: ♀ ♀ only.

PONTANIA Costa.

P. salicis Christ. Nottingham, ♀, 23. v. 1913 (*Saunt*). Fiskerton, on willow, ♀, 25. vii.; North Collingham, on willow, ♀, 25. viii.—1913.

PTERONUS Jur.

P. ribesii Scop. Nottingham, common in gardens in May, and also occurs in August. I have seen gooseberry bushes defoliated by the larvae in many places in the county.

P. myosotidis Fab. South Leverton, ♂, 23. v. 1900; Crown End Wood, West Leake, ♂, July 1914 (*Thornley*). Aspley Woods near Nottingham, ♂, 28. viii. 1912; Aldercar Wood, Newstead, ♀, 13. viii.; Widmerpool, ♂, 12. viii.—1914; Attenborough, ♀, 14. viii.; East Leake, ♂, 2. vi.—1915.

P. segmentarius Först. Warsop, ♂, 14. vii. 1913.

P. oligospilus Först. Langford Moor near Newark, ♀, 16. viii. 1912; on willow by the Trent at Attenborough, ♀, 14. viii. 1913.

P. brevis Thoms. Bred from pupa found at Langford Moor in 1912 (*Saunt*).

P. capreae Knw., *nec.* L. (*P. sylvestris* Cam.). Near Newbound Mill, Teversall, 26. vi.; Fiskerton, 25. vii.—1913. Beaten from willows, ♀ ♀ only.

AMAURONEMATUS Knw.

A. fallax Lep. Cuckney Hay Wood, Nether Langwith, ♀, 11. viii. 1914 (*C. Morley*).

A. viduatus Zett. Langford Moor, ♂ ♀, 25. v. 1913 (*Saunt*).

A. vittatus Lep. One ♀ taken in my garden at Nottingham, 22. viii. 1903.

CROESUS Leach.

C. septentrionalis L. Treswell Wood, larvae beaten from hazel, September 1898: first imago emerged 30. v. 1899

(*Thornley*). Cuckney Hay Wood, Nether Langwith, larvae, 11. viii. 1914.

HOLCOCNEME Knw.

H. lucida Panz. South Leverton, not uncommon; East Park Wood, Laxton, ♀, 15. vi. 1906 (*Thornley*). Roe Wood, Winkburn, ♀, 25. iv. 1914.

PACHYNEMATUS Knw.

P. flaviventris Htg. Aspley Woods near Nottingham, ♂, 9. viii. 1912; Sherwood Forest near Ollerton. June; Linby, ♂, 29. vii.; Widmerpool, ♂, 12. viii.—1914.

P. trisignatus Först. (*P. capreae* Cam.). South Leverton (*Thornley*). Nottingham, one ♀ in my garden, 14. v. 1900; Cuckney Hay Wood, Nether Langwith. ♀ ♀, 11. viii. 1914.

P. clitellatus Lep. South Leverton (*Thornley*). Bulwell, ♀, 9. v. 1914 (*Saunt*). Langford Moor. ♀, 14. viii.; Widmerpool, ♀, 12. viii.—1914 (*Morley and Carr*).

P. apicalis Htg. Arnold, ♂ ♀, 14. v. 1914 (*Robinson*).

P. pleuralis Thoms. (?) Garden at Mapperley, Nottingham, 17. v. 1914 (*Thornley*).

P. vagus Fab. Two ♂ ♂ and one ♀ taken in a marshy place near Newbound Mill, Teversall, 26. vi. 1913 (*Carr*). Nuthall, a somewhat doubtful ♀, 9. vii. 1914 (*Robinson*).

P. obductus Htg., var. *conductus*. Cuckney Hay Wood, Nether Langwith, ♀, 11. viii.; Aldercar Wood, Newstead, ♀, 13. viii.—1914 (*Carr*). Mapperley, Nottingham, ♀, 13. ix. 1912 (*Thornley*).

LYGAEONEMATUS Knw.

L. pini Retz. Crow Wood Hill, West Leake, ♂, 19. v. 1914.

L. biscalis Först. Near Newbound Mill, Teversall, ♂, 25. v. 1915.

L. compressicornis Fab. Bulwell Forest, ♂, 20. vi. 1900.

L. laricis Htg. West Leake Hills, ♀, August 1912 (*Thornley*).

PRISTIPHORA Latr.

P. fulvipes Zett. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Langford Moor, ♀, 13. iv. 1913 (*Saunt*).

- P. crassicornis** Htg. Crow Wood Hill, West Leake, ♀, 2. vi.; North Collingham, ♀, 25. viii.—1913; Sherwood, Nottingham, ♂, 28. vii. 1914; Lambley, ♂ ♀, 22. v.; near Newbound Mill, Teversall, ♂, 25. v.—1915 (*Carr*). Gamston near Nottingham, ♂, 2. vii. 1914 (*Robinson*).
- P. ruficornis** Ol. A ♂ from Langford Moor near Newark, 14. viii. 1914, is referred, with some doubt, to this species by Rev. F. D. Morice.
- P. pallipes** Lep. Aspley Woods near Nottingham, ♀, 26. vii. 1912; Sherwood Forest near Edwinstowe, ♀, 12. vi. 1912.
- P. pallidiventris** Fall. Beauvale Woods, Greasley, ♀, 12. vii. 1912; Thorney, ♀, 15. viii. 1913; Crow Wood Hill, West Leake, ♀ ♀, 19. v. 1914; near Newbound Mill, Teversall, ♀, 25. v. 1915.

ERIOCAMPOIDES Knw.

- E. aethiops** Fab. Car Colston, 11. iv. 1912; garden at Sherwood, Nottingham, 24. v. 1913: ♀ ♀ only.
- E. limacina** Retz. Wellow; Lowdham; the slimy, slug-like larvae causing damage to pear trees.
- E. annulipes** Klug. Orchard at Kingston Hall, ♀, 31. vii. 1914 (*Thornley*).

HOPLOCAMPA Htg.

- H. testudinea** Klug. South Leverton (*Thornley*).

MESONEURA Htg.

- M. opaca** Fab. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).

TOMOSTETHUS Knw.

- T. nigritus** Fab. Burton Joyce, ♀, 18. v. 1899; Aspley Woods, ♀, 18. v. 1912.
- T. fuliginosus** Schr. South Leverton and Treswell Wood, 14—20. v. 1901 (*Thornley*). Sherwood Forest near Ollerton, ♂ ♀, June 1914 (*L. A. Carr*). Clipston Wolds, 12. viii. 1914; Attenborough, ♂, 5. vi. 1915.
- T. dubius** Gmel. Treswell Wood, 29. v. 1899 (*Thornley*).
- T. luteiventris** Klug. Treswell Wood, 4. vi. 1900 (*Thornley*). The Dumbles, Kirkby-in-Ashfield, several ♀ ♀, 28. vi. 1913; near Newbound Mill, Teversall, ♀ ♀, 25. v. 1915.

BLENNOCAMPA Htg.

- B. assimilis** Fall. Bradmore, ♀, 13. v. 1913 (*Saunt*).
B. pusilla Klug. (?) Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).
B. alternipes Klug. Near Widmerpool, ♂, 12. viii. 1914 (*C. Morley*).
B. sub serrata Cam. Aspley Woods, ♀, 28. v. 1912.

MONOPHADNUS Htg.

- M. albipes** Gmel. South Leverton; Treswell Wood (*Thornley*).
 Tollerton, 22. v. 1913; Arnold, 14. v.; Gamston near Nottingham, 2. vii.—1914 (*Robinson*). Southwell, 6. vi. 1912; Crow Wood Hill, West Leake. 17 and 19. v. 1914.
 All these specimens are females.

KALIOSYSPHINGA Tisch.

- K. ulmi** Sund. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*).
K. dohrni Tisch. The Dumbles, Kirkby-in-Ashfield, ♂, 28. vi. 1918.

FENUSA Leach.

- F. pygmaea** Klug. Crow Wood Hill, West Leake, ♀ ♀, 2 and 14. vi. 1913.
F. nigricans Klug. Nottingham, one ♀ in my garden, 18. vi. 1900.

ATHALIA Leach.

- A. glabricollis** Thoms. Gamston near Nottingham, ♀, 15. vi. 1911 (*Robinson*).
A. lineolata Lep. Very common in all parts of the county throughout the summer.

SELANDRIA Klug.

- S. serva** Fab. South Leverton; Treswell Wood; Cottam; Retford (*Thornley*). Stapleford, ♂, 24. v.; Annesley, 15. viii.—1914 (*Saunt*). Arnold, ♀, 4. vi. 1914 (*Robinson*). Bunny; Cuckney Hay Wood, Nether Langwith, ♂, 11. viii.; Langford Moor, ♀, 14. viii.—1914; Attenborough, several ♀ ♀, 8. vi., and ♂ ♂, 14. viii.; Oxtou Bogs, ♂, 14. vii.—1915.

- S. sixii** Voll. Nottingham and Wollaton, in June; ♀ ♀ only.
- S. stramineipes** Klug. Edwinstowe, Sherwood Forest, June and July 1911-12; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915; East Leake, 30. vi. 1912. Only ♀ ♀ taken.
- S. morio** Fab. Near Widmerpool, ♀ ♀, 12. viii. 1914 (*Morley* and *Carr*).
- S. cinereipes** Klug. Gotham, ♀, 3. vii. 1915.

STROMBOCEROS Knw.

- S. delicatulus** Fall. Worksop (*Lady Robinson*). Treswell Wood, 6. vi. 1900 (*Thornley*). Ollerton and Edwinstowe, ♂ ♀, July 1911-12; Aspley Woods, ♀, 9. viii. 1912.

STRONGYLOGASTER Dahl.

- S. cingulatus** Fab. Edwinstowe, not uncommon in the Forest amongst bracken; East Leake, on bracken, 26. v. 1912; ♀ ♀ only.
- S. xanthoceros** Steph. Sherwood Forest, one ♀, June 1907 (*Donisthorpe*).

POECILOSOMA Dahl.

- P. excisa** Thoms. Crow Wood Hill, West Leake, ♂ ♂, 14. vi. 1913 and 17. v. 1914.
- P. liturata** Gmel. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Gamston near Nottingham, ♂, 28. iv. 1915 (*Robinson*).
- P. longicornis** Thoms. Aspley Woods, both sexes, 18—28. v. 1912 (*Carr*). Arnold, ♂, 14. v.; Linby, ♀, 28. iv.—1914 (*Robinson*).
- P. tridens** Knw. South Leverton, 7. v. 1898 (*Thornley*). Radcliffe-on-Trent, ♀, 1. v. 1913 (*Robinson*).

EMPHYTUS Klug.

- E. togatus** Panz. Trent-bank, Littleborough, 14. vii. 1899; Treswell Wood, 14. vi. 1901 (*Thornley*).
- E. cinctus** L. North and South Leverton, both sexes in May and June (*Thornley*). Sherwood Forest near Edwinstowe, ♀, June 1912; Thorney, ♀, August 1913 (*L. A. Carr*). Arnold, ♀, 27. vii. 1911 (*Robinson*). Nottingham; Bradmore; Owthorpe (*Saunt*). East and West Leake, both sexes,

- 25 and 27. v. 1913 and 17. v. 1914; near Newbound Mill, Teversall, ♂, 25. v. 1915.
- E. calceatus** Klug. Langford Moor near Newark (*Carr*). Widmerpool, ♂, 12. viii. 1914 (*Morley*).
- E. serotinus** Müll., var. *tarsatus*. Sherwood Forest near Edwinstowe, one ♂, 25. ix. 1913 (*Carr*). Langford Moor, two ♀ ♀, 28. ix. 1913 (*Saunt*).
- E. tener** Fall. Blidworth, ♀, 22. viii. 1899; Langford Moor, ♀, 16. viii. 1912; Plumtree, ♀, 3. ix. 1913; Crow Wood Hill, West Leake, ♂, 19. v. 1914 (*Carr*). Watnall, ♀, 28. v. 1914 (*Robinson*).
- E. carpini** Htg. Fiskerton, ♀, 25. vii. 1913.
- E. grossulariae** Htg. South Leverton, 4. vi. 1899 (*Thornley*). West Leake Hills, 21. viii. 1913; near Newbound Mill, Teversall, 25. v. 1915. Only ♀ ♀ taken.

TAXONUS Htg.

- T. equiseti** Fall. Cuckney Hay Wood, Nether Langwith, ♀, 11. viii. 1914 (*Morley*).
- T. glabratus** Fall. Radcliffe-on-Trent, ♀, 12. vi. 1913 (*Robinson*). Sneinton, Nottingham, ♀, 1. ix.; Epperstone Park, ♀, 6. ix.—1914 (*Saunt*). Near Newbound Mill, Teversall, ♀ ♀, 26. vi. 1913 and 25. v. 1915; Attenborough, ♀, 14. viii. 1913, and ♂ ♂, 5. vi. 1915; Arnold, ♂, 17. viii. 1915; East Leake, ♀, 25. v. 1913 (*Carr*). Sherwood Forest near Ollerton, ♂ ♂ ♀ ♀, June 1914 (*L. A. Carr*). Kingston-upon-Soar, ♀, 10. viii. 1914 (*Thornley*).

DOLERUS Jur.

- D. madidus** Klug. Retford, one ♀ (*Pegler*). Worksop, 2. vi. 1908 (*Thornley*). Fulwood near Sutton-in-Ashfield, ♂, 19. v. 1900.
- D. pratensis** L. Retford, ♂ (*Pegler*). Nottingham; Sutton near Retford; Sherwood Forest near Ollerton.
- D. aericeps** Thoms. Thorney, ♂, 26. v. 1900; Cinder-hill brickyard near Nottingham, ♂ ♀, 30. vi. 1903; near Newbound Mill, Teversall, ♀, 3. viii. 1912.
- D. palustris** Klug. Sutton near Retford, ♂ ♀ (*Thornley*).
- D. gonager** Fab. South Leverton, April; Clarbrough (*Thornley*). Burton Joyce, ♂ ♂, 3. iv. 1913; Clifton, ♂, 21. iv.;

- Bulwell, ♂, 28. v.—1914 (*Robinson*). Mansfield, ♀ ♀, 1. vi. 1913; Langford Moor, ♂ ♂, 15. vi. 1911 (*Saunt*). Nottingham; Bulwell Forest; Lambley; Ruddington; West Leake; etc.; both sexes rather common in May.
- D. puncticollis** Thoms. Mapperley Plains near Nottingham, ♀, 21. iv. 1898; Southwell, ♂, 10. vi. 1899.
- D. haematodes** Schrank. South Leverton, 28. iv. 1900; Nottingham, ♀, 18. iv. 1909 (*Thornley*). Clifton, several ♀ ♀. 24. v. 1900 (*Carr*). Beeston, 27. iii. 1914 (*Robinson*). Bradmore, ♀, 13. v. 1913 (*Saunt*).
- D. sanguinicollis** Klug., var. *fumosus* Steph. (*ravus* Zadd.). Aspley Woods near Nottingham, ♀, 3. iv., and ♂, 28. v.; Bingham, ♂, 11. v.; Sherwood Forest near Edwinstowe, ♂, 12. vi.—all 1912.
- D. niger** L. Aspley Woods, a ♀, 11. vi. 1912.
- D. nitens** Zadd. South Leverton, ♂ (*Thornley*). Retford, ♂ (*Pegler*).
- D. picipes** Klug. South Leverton, both sexes rather common; Retford, ♂, April 1897 (*Thornley*). Burton Joyce, ♂, 3. iv. 1913 (*Robinson*). Bulwell Forest, ♂, 20. v. 1900; Nottingham, several ♀ ♀, 23. v. 1913.
- D. nigratus** Müll. South Leverton (*Thornley*). Papplewick, 1. v. 1914 (*Robinson*). Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*). Gedling, ♀, 24. iv. 1898; Ruddington, ♀, 5. v. 1901; Nottingham, several ♀ ♀ during May 1913; East Leake, ♂, 25. v. 1913; Crow Wood Hill, West Leake, ♂, 17. v. 1914; Attenborough, ♀, 8. vi. 1915.
- D. aeneus** Htg. South Leverton (*Thornley*). Mansfield; Linby; Stapleford; Epperstone Park; Langford Moor (*Saunt*). Arnold; Papplewick (*Robinson*). Near Newbound Mill, Teversall; Thorney; Nottingham; Bulwell Forest; Aspley Woods; Lambley; Oxtun Bogs; Radcliffe-on-Trent; East and West Leake; etc. Both sexes are rather common: dates range from April 3rd to June 2nd, but a ♀ was taken at Oxtun Bogs on July 14, 1915.
- D. rugosulus** Dall. Tor. (?) A ♀ from South Leverton, 8. iv. 1897 (*Thornley*) is labelled by Rev. F. D. Morice "doubtful, perhaps *D. rugosulus*."

LODERUS Knw.

- L. vestigialis** Klug. Sherwood Forest near Ollerton, ♂ ♂, June 1914 (*L. A. Carr*).

RHOOGASTER Knw.

- R. punctulata** Klug. Beeston; Rampton; East Park Wood, Laxton; all in June 1906 (*Thornley*).
- R. viridis** L. South Leverton; Treswell Wood; Littleborough; Laxton (*Thornley*). Nottingham; Widmerpool; Langford Moor; Cottam near Retford; Budby and Edwinstowe, Sherwood Forest. A rather common species in June and early July.
- R. fulvipes** Scop. South Leverton; Treswell Wood (*Thornley*). Linby; Bradmore; Owthorpe (*Saunt*). Near Newbound Mill, Teversall; Annesley; Lambley; Thurgarton; Widmerpool; West Leake. Both sexes are rather common: my dates range from April 19th to June 2nd.
- R. aucupariae** Klug. Bradmore, four ♂♂, one ♀, 13. v. 1913; Epperstone Park, 17. v. 1914 (*Saunt*). Burton Joyce, ♂, 3. iv.; Tollerton, ♂, 22. v.—1913 (*Robinson*). Sherwood Forest, Edwinstowe and Ollerton, June 1912—14; Nottingham, ♀, 15. v. 1914; Broxtowe; Nuthall; Gedling; East Leake, ♂♀, 20. iv., and ♂, 25. v. 1913; Crow Wood Hill, West Leake, ♂♂, 17. v. 1914.

PERINEURA Htg.

- P. rubi** Panz. Aspley Woods near Nottingham, ♀, 28. v. 1912.

PACHYPROTASIS Htg.

- P. rapae** L. South Leverton; East Park Wood, Laxton; Kingston-upon-Soar (*Thornley*). Sherwood Forest near Edwinstowe and Ollerton; Nether Langwith; Skegby; Nottingham; Aspley Woods; Strelley; Bulwell; Lambley; West Leake; Radcliffe-on-Trent. A fairly common species, the ♀♀ being much the more frequent. My dates range from May 19th to August 15th.

MACROPHYA Dahl.

- M. annulata** Geoff. Langford Moor near Newark, one ♀, 5. vi. 1911 (*Saunt*). Crow Wood Hill, West Leake, ♂♂, 27. v. and 2. vi. 1913.
- M. albicincta** Schr. Aspley Woods, Nottingham, ♂♂, 28. v. 1912; Crow Wood Hill, West Leake, both sexes common, 27. v. and 14. vi. 1913, 17 and 19. v. 1914; Sherwood Forest; near Newbound Mill, Teversall, ♂, 25. v. 1915 (*Carr*). Epperstone Park, ♂, 17. v. 1914 (*Saunt*).

- M. ribis** Schr. South Leverton (*Thornley*). Langford Moor, ♀ ♀ (*Saunt*). Sherwood Forest near Edwinstowe, ♂ ♂, 9. vii. 1903; Aspley and Beauvale Woods, both sexes common, 9. vii. to 9. viii. 1912.

ALLANTUS Jur.

- A. scrophulariae** L. Not uncommon at flowers of *Scrophularia aquatica* in July and August. Kingston-upon-Soar; Bunny; Oxtou Bogs; Budby; Treswell; Cottam; West Burton; Wheatley; Broadholme; etc.
- A. arcuatus** Först. Common throughout the county from May to August on flowers of Umbelliferae. The variety *nitidior* Knw. is not uncommon.
- A. vespa** Retz. Treswell Wood and Rampton Marsh, July 1899: many specimens taken (*Thornley* and *Carr*).

TENTHREDO L.

- T. maculata** Geoff. Treswell Wood (*Thornley*). Trowell, two ♀ ♀, 15. vi. 1913 (*Saunt*). Aspley Woods near Nottingham, ♂, 11. vi. 1912.
- T. temula** Scop. Southwell, common, 10—15. vi. 1899; Bagthorpe, Nottingham, ♀, 19. vi. 1900; Widmerpool, ♀, 23. vi. 1900; Lowdham, ♂, 11. vi. 1901; Crow Wood Hill, West Leake, both sexes common on flowers of *Anthriscus sylvestris*, 27. v. 1913, etc.
- T. mesomela** L. Common throughout the county on umbelliferous flowers, etc., May to July.
- T. atra** L. Rampton, ♂, 8. vi. 1906 (*Thornley*). Crow Wood Hill, West Leake, ♀, 27. v. 1913 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Nuthall, ♂, 24. v. 1915 (*Robinson*).
- var. *dispar* Klug. South Leverton (*Thornley*). Sherwood Forest near Edwinstowe, ♀, 10—14. vi. 1912 (*L. A. Carr*). Langford Moor, ♀, 25. v. 1913 (*Saunt*).
- T. livida** L. Widely distributed in the county and fairly common. South Leverton; Treswell Wood; Worksop (*Thornley*). Linby; Trowell; Epperstone Park (*Saunt*). Sherwood, Nottingham; Aspley Woods; Cossall; Lowdham; East and West Leake; Southwell; Cuckney Hay Wood, Nether Langwith; Edwinstowe and Ollerton; etc. May 25th to July 9th. I took a ♀ of an all-black variety in Aspley Woods, 9. vii. 1912.

- T. fagi** Panz. Langford Moor near Newark (*Carr*). Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).
- T. colon** Klug. Epperstone Park, 22. vi. 1913 (*Saunt*). Arnold, ♂, 10. vi. 1915 (*Robinson*).
- T. ferruginea** Schr. Treswell Wood (*Thornley*). Langford Moor; Sherwood Forest near Edwinstowe. All females, taken from 10th to 29th June.
- T. balteata** Klug. Radcliffe-on-Trent, one ♀, 27. v. 1912 (*Robinson*). Sherwood Forest near Edwinstowe and near Ollerton, both sexes, July 1911-12.

TENTHREDOPSIS [~]Costa,

The specific determination of individuals belonging to this genus is often exceedingly difficult, owing to the grave doubt whether all, or even any, of the colour-characters on which alone the descriptions of authors have been founded are really constant, and to the lack, except in a very few cases, of any definite and unmistakeable structural differences between one supposed "species" and another. It is believed that the names given below represent the views of present-day specialists, so far as the subject has yet been studied; but as things now are both the classification and nomenclature of *Tenthredopsis*-forms can only be regarded as provisional (*Rev. F. D. Morice in litt.*, Sept. 30. 1915).

- T. excisa** Thoms. North Leverton, ♂, 4. vi. 1901 (*Thornley*).
- T. litterata** Geoff. South Leverton, ♂, 2. vii. 1898; East Park Wood, Laxton, ♂, 15. vi. 1906 (*Thornley*). Southwell, ♂, 10. vi. 1899; Nottingham, ♂, 4. vi. 1903; Sherwood Forest near Edwinstowe, ♂, 12. vi. 1912; East Leake, ♂, June 1913; Crow Wood Hill, West Leake, ♂, 2. vi. 1913. The three varieties which follow are confined to the female sex.
- var. *varia* Gmel. (*T. cordata* Cam.). Strelley, 14. vi. 1899 (*Carr*). South Leverton (*Thornley*).
- var. *cordata* Geoff. (*T. femoralis* Cam.). Sherwood Forest near Edwinstowe, 12. vi. 1912; Bagthorpe, Nottingham, 19. vi. 1900 (*Carr*). Saundby near Retford, 14. vi. 1901 (*F. Shaw*).
- var. *thoracica* Geoff. (*T. microcephala* Cam.). Strelley, 12. vi. 1899.
- T. nassata** L. (*T. nassata* Knw., *T. tiliæ* Knw., *T. raddatzii* Knw.). Retford; South Leverton (*Thornley*). Near Tollerton, a ♀ variety, 25. v. 1911 (*Robinson*). Sherwood

Forest near Edwinstowe, ♀, 12. vi. 1912; Nottingham; Radcliffe-on-Trent, ♀, 29. v. 1912; East Leake, ♂♂, 25. v.; Crow Wood Hill, West Leake, ♂, 27. v.—1913.

T. dorsivittata Cam. East Leake, ♀, 26. v. 1912 (*Carr*).
(?) Stapleford, ♀, 24. v. 1914 (*Saunt*).

T. dorsalis Lep., Knw., *nec.* Spin. (*T. inornata* Cam., *sec.* Enslin). Treswell; North Leverton; Besthorpe, a ♀ var., 13. vi. 1914 (*Thornley*). Stapleford, ♂♂, 24. v. 1914 (*Saunt*). Crow Wood Hill, West Leake, ♂, 17. v. 1914; East Leake, 2. vi. 1915; (?) Gotham, ♀, 3. vii. 1915.

T. flavomaculata Cam. (?) Papplewick, ♂♂, 1. vi. 1914 (*Robinson*).

T. tristior Morice. (?) Lambley, ♀, 6. vi. 1911 (*Robinson*).
Aspley Woods near Nottingham, ♂, 28. v. 1912.

T. thornleyi Knw. South Leverton, two specimens, May and June 1897 (*Thornley*). [On these and two specimens from Lincolnshire the species was founded by Konow].
(?) Wollaton, ♀, 27. vi. 1903; (?) Crow Wood Hill, West Leake, ♂, 19. v. 1914. (*Carr*). (?) Stapleford, ♂, 24. v. 1914 (*Saunt*). (?) Sherwood Forest near Ollerton, ♂♀, June 1914 (*L. A. Carr*).

T. coqueberti Klug. Worksop (*Houghton*). South Leverton, ♀ (*Thornley*). Nottingham, ♀♀ (*Thornley, Carr*). Southwell, 15. vi. 1899; Cinder-hill near Nottingham, ♀, 30. vi. 1903; Sherwood Forest near Edwinstowe and Ollerton, ♀♀, June 1912—14; Gotham, ♂, 3. vii. 1915.

T. palmata Geoff. (*T. "campestris* L., "scutellaris Panz.," Knw., *scutellaris* Cam.). South Leverton and Treswell Wood (*Thornley*). Linby, ♂, 31. v.; Mansfield, ♂♂, 1. vi.; Trowell, several ♂♂, 15. vi.—1913 (*Saunt*). Southwell, 10. vi. 1899; Sherwood Forest near Edwinstowe, ♂♀, June; Aspley Woods near Nottingham, ♂, 28. v.; Radcliffe-on-Trent, ♂♂, 29. v.; East Leake, ♂, 19. v.—1912; Crow Wood Hill, West Leake, ♂♀♀, 14. vi.; the Dumbles, Kirkby-in-Ashfield, ♀, 28. vi.—1913.

CLISTOGASTRA (PETIOLATA).

CYNIPIDAE.

ANACHARIS Dalm.

A. tinctor Walk. Sherwood Forest near Edwinstowe, 12. vi. 1912; Nottingham, May 1914.

AMBLYNOTUS Hartig.

- A. femoralis** (Cam). (?) Aspley Woods near Nottingham,
4. vii. 1912.

NEUROTERUS Hartig.**N. tricolor** Hart.

- A. *Sexual generation*. Produces clustered rounded hairy galls on under side of leaves of *Quercus*. Clifton; Ruddington; Balloon Houses, Wollaton (*Rothera*).
B. *Agamic generation* (*N. fumipennis* Hart.). Forms gregarious cupulate spangles on under surface of oak leaves. Ollerton (*Rothera*). Bestwood Park (*Thornley*).

N. albipes (Schenck).

- A. *Sexual generation*. Forms small oviform galls on margins of leaves of *Quercus*. Recorded for Notts., but without locality, by *Rothera*.
B. *Agamic generation* (*N. laeviusculus* Schenck). Forms cupulate spangles on under side of leaves of *Quercus*. Ollerton (*Rothera*).

N. quercus-baccarum (L.).

- A. *Sexual generation*. Forms 'currant galls' on catkins and leaves of *Quercus*. Nottingham Forest; Clifton; Oxtun (*Rothera*). Manton Woods near Worksop (*Thornley*).
B. *Agamic generation* (*Diplolepis lenticularis* Ol.). Forms the familiar button-like 'oak spangles' on under side of leaves of *Quercus*. Clifton; The Birklands, Sherwood Forest (*Rothera*). Kingston-upon-Soar (*Thornley*).

N. numismalis (Fourc.).

- A. *Sexual generation* (*Cynips resicatrix* Schlechtld.; *Neuroterus resicatrix* Mayr). Forms small blister-like swellings on leaves of *Quercus*. Nottingham Forest (*Rothera*).
B. *Agamic generation* (*Cynips numismalis* Fourcr.; *Neuroterus numismatis* Mayr). Forms silky 'button galls' on under surface of leaves of *Quercus*. Ollerton (*Rothera*). Kingston-upon-Soar (*Thornley*).

- N. aprilinus** (Gir.). *Sexual generation*. Forms galls in buds of *Quercus*. Sherwood Forest (*Rothera*).

DIPLOLEPIS Geoffr.

- D. quercus-folii** (L.). *Agamic generation* (*Dryophanta scutellaris* Mayr). Produces the 'cherry gall' on leaves of *Quercus*.

Bestwood Park; Ollerton (*Rothera*). Kingston-upon-Soar (*Thornley*).

D. longiventris (Hart.). *Agamic generation*. Forms rounded papillated galls on under surface of leaves of *Quercus*. Ollerton (*Rothera*).

D. divisa (Hart.). *Agamic generation*. Forms small rounded galls on under side of leaves of *Quercus*. Nottingham Forest; Clifton (*Rothera*). Bestwood Park (*Thornley*).

D. agama (Hart.). Forms oval yellow galls on under side of leaves of *Quercus*. Nottingham Forest (*Rothera*). Kingston-upon-Soar (*Thornley*).

TRIGONASPIS Hartig.

T. megaptera (Panz.).

A. *Sexual generation*. Forms galls from adventitious buds low down on bole of oak. Sherwood Forest (*Rothera*). Insects collected in Sherwood Forest near Edwinstowe, June 1912 (*Carr*).

B. *Agamic generation* (*Cynips renum* Hart.; *Biorhiza renum* Gir.; *Trigonaspis renum* Mayr). Produces kidney-shaped galls on under surface of leaves of *Quercus*. Ollerton (*Rothera*). Bestwood Park (*Thornley*).

BIORHIZA Westw.

B. pallida (Ol.).

A. *Sexual generation* (*Teras terminalis* Hart.; *Biorhiza terminalis* Mayr). Forms the well-known 'oak-apple' galls on buds of oak. Mapperley Park, Nottingham; Bulwell Lane; Kingston; Southwell (*Rothera*). Hockerton, etc.

B. *Agamic generation* (*Cynips aptera* Bosc.; *Biorhiza aptera* Mayr). Galls gregarious on roots of oak. Gedling; Bulwell Lane (*Rothera*). Nuthall, 9. vii. 1914 (*Robinson*).

CYNIPS L.

C. kollari Hart. Forms the familiar spherical marble-like galls on oak buds. Clifton; Ruddington; Bulwell Lane; etc. (*Rothera*). Bred, 24. ix. 1912, from galls collected at Radcliffe-on-Trent (*Robinson*), and 29. viii. 1913, from galls collected at West Leake (*Carr*). Captured at Worksop, 1913 (*Hodding*), and Calverton, 9. viii. 1914 (*Saunt*).

ANDRICUS Hartig.

- A. quercus-radiciis** (Fab.). *Agamic generation*. Forms 'truffle galls' on roots of *Quercus*. Recorded, without locality, by Rothera.
- A. quercus-corticis** (L.). *Agamic generation*. Galls gregarious, embedded in bark of oak. Mapperley Park, Nottingham (*Rothera*).
- A. foecundatrix** (Hart.). *Agamic generation*. Forms the 'artichoke galls' in oak buds. Ollerton (*Rothera*). Kingston-upon-Soar (*Thornley*). Widmerpool, etc.
- A. ostrea** (Hart.). *Agamic generation*. Forms small ovoid glossy galls on leaves of *Quercus*. Nottingham; Bulwell; etc. (*Rothera*).
- A. inflator** Hart.
- A. *Sexual generation*. Gall developed in apical bud of oak, producing a conspicuous terminal swelling. Sherwood Lodge (*Rothera*).
 - B. *Agamic generation* (*Cynips globuli* Hart.; *Andricus globuli* Mayr). Forms globular galls in buds of *Quercus*. Clifton; Ruddington; Ollerton (*Rothera*).
- A. curvator** Hart.
- A. *Sexual generation*. Forms rounded or irregular galls on leaves of *Quercus*, which are often much distorted in consequence. Bulwell Lane (*Rothera*). On road to Kingston from Kegworth station (*Thornley*).
 - B. *Agamic generation* (*Cynips collaris* Hart.; *Andricus collaris* Mayr). Gall concealed in leaf bud of oak. Recorded by Rothera without locality.
- A. callidoma** (Hart.). *Sexual generation* (*A. cirratus* Adl.). Forms tufted hairy galls on staminate catkins of *Quercus sessiliflora*. Between Clifton and Ruddington (*Rothera*).
- A. quercus-ramuli** (L.).
- A. *Sexual generation*. Forms cottony galls on catkins of oak. Bulwell Lane plantation; Ruddington (*Rothera*).
 - B. *Agamic generation* (*Cynips autumnalis* Hart.; *Andricus autumnalis* Mayr). Galls in terminal buds of oak. Stapleford Hill (*Rothera*).
- A. albopunctatus** (Schlechtld.). *Agamic generation*. Galls green, white-spotted, in leaf buds of *Quercus*. Gedling (*Rothera*).

- A. marginalis** (Schlechtld.). *Agamic generation.* Galls on margins of leaves of *Quercus*. Gedling (*Rothera*).
- A. quadrilineatus** Hart. *Agamic generation.* Forms galls in staminate catkins of *Quercus*. Recorded, without locality, by *Rothera*.
- A. solitarius** (Fonsc.). *Agamic generation.* Gall spindle-shaped, covered with ferruginous hairs, in leaf buds of *Quercus*. Ollerton, Sherwood Forest (*Rothera* and *Ransom*).
- A. glandulae** (Hart.). *Agamic generation.* Forms conical galls covered with adpressed silky hairs in lateral buds of *Quercus*. The Birklands, Sherwood Forest (*Rothera*). Near Edwinstowe, Sherwood Forest (*Thornley*).

SYNERGUS Hartig.

- S. umbraculus** (Ol.). (*S. melanopus* Hart.). Inquiline in galls of *Cynips kollari*. Notts. (*Rothera*).
- S. reinhardi** Mayr. Sherwood Forest, Edwinstowe, 10. viii. 1914 (*Morley* and *Carr*). Inquiline in *Cynips kollari* galls. Notts. (*Rothera*).
- S. gallae-pomiformis** (Fonsc.). (*S. facialis* Hart.). Inquiline in oak-apples and oak currant galls (*Rothera*).
- S. tscheki** Mayr. Inquiline in oak-apples (*Rothera*).
- S. albipes** Hart. Inquiline in, and bred from, galls of *Andricus currator*, *Cynips kollari*, *Trigonaspis megaptera*, *Diplolepis quercus-folii*, *D. divisa*, and *Neuroterus tricolor* (agamic gen.), all on oak (*Rothera*).
- S. thaumacerus** (Dalm.). Inquiline in galls of *Trigonaspis megaptera* (*Rothera*).

PERICLISTUS Först.

- P. brandtii** (Ratzebl.). Inquiline in galls of *Rhodites rosae* (*Rothera*).
- P. caninae** (Hart.). Inquiline in galls of *Rhodites eglanteriae* and *R. rosarum* (*Rothera*).

XESTOPHANES Först.

- X. brevitarsis** (Thoms.). Galls on stem of *Potentilla tormentilla*, West Leake Hills, 9. viii. 1911 (*Thornley*).

DIASTROPHUS Hartig.

- D. rubi** (Bouché). Forms irregular fusiform swellings on stems of brambles. Strelley (*Rothera*).

AYLAX Hartig.

- A. glechomae** (L.). Forms soft rounded or irregular swellings on leaves or stems of *Nepeta glechoma*. Linby (*Rothera*).
- A. papaveris** (Perris). The larvae inhabit the capsules of *Papaver rhoeas* and *P. dubium*, which in consequence often become much swollen and distorted. On *P. dubium*, West Leake; Holme near Newark; etc.

AULACIDEA Ashm.

- A. hieracii** (L.). Produces large green hairy swellings on the stem of *Hieracium*. Recorded, without locality, by *Rothera*.

RHODITES Hartig.

- R. eglanteriae** Hart. Forms smooth round pea-like galls on leaves of *Rosa canina*. Arnold; Lenton; Elton; etc. (*Rothera*). South Leverton; Kingston-upon-Soar (*Thornley*). Crow Wood Hill, West Leake.
- R. rosarum** Gir. Gall pea-shaped, but beset with three to six stout spines: on leaves of *Rosa canina*. Lenton (*Rothera*). South Leverton; Kingston (*Thornley*). Beauvale Woods; Cuckney Hay Wood, Nether Langwith.
- R. rosae** (L.). Causes the familiar 'bedeguar' or 'Robin's pincushion' galls on *Rosa canina*. Common throughout the county.
- R. nervosus** Curt. One specimen of the perfect insect taken at Attenborough, 8. vi. 1915.

*PROCTOTRYPIDAE.***PROCTOTRYPES** Latr.

- P. pallidipes** Jur. Crow Wood Hill, West Leake, 9. viii. 1914; Sherwood Forest, Edwinstowe, 10. viii. 1914 (*Morley and Carr*).

TRICHOSTERESIS Först.

- T. nitida** Thoms. Sneinton, Nottingham, Sept. 1913 (*Saunt*). Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley and Carr*).

CEPHALONOMIA Westw.

- C. brevipennis** Kieff. Sherwood Forest, *Rev. A. T. Marshall* (*André, Spec. des Hyménoptères d'Europe*, vol. ix., p. 458).

PERISEMUS Först.

- P. triareolatus** Först. (= *Bethylus fuscicornis* Jur. non Nees). Fiskerton, near Midland railway station, 25. vii. 1913 (*Carr*). Cuckney Hay Wood, 11. viii. 1914; Langford Moor, 14. viii. 1914 (*Morley* and *Carr*). The late Mr. G. B. Rothera bred *Perisemus fulvicornis* Curt. (which = *P. triareolatus*) from oak-apple galls found in the neighbourhood of Nottingham.

GONATOPUS Ljungh.

- G. distinctus** Kieff. Sherwood Forest near Edwinstowe, 10—14. vi. 1912 (*L. A. Carr*).

ANTAEON Jur.

- A. ephippiger** Dalm. Sherwood Forest near Ollerton, 22—26. vii. 1912 (*L. A. Carr*).

HELORUS Latr.

- H. anomalipes** Panz. Bilborough, 13. vii. 1911; Nuthall, 1. vii. 1915 (*Robinson*). Langford Moor near Newark, 16. viii. 1912; Crow Wood Hill, West Leake, 9. viii. 1914.

BELYTA Jur.

- B. validicornis** Thoms. Cuckney Hay Wood, Nether Langwith, 19. vi. 1915.

SCELIO Latr.

- S. rugosulus** Latr. Langford Moor near Newark, 14. viii. 1914 (*C. Morley*).

CHALCIDIDAE.

PERILAMPUS Latr.

- P. ruficornis** Fab. Thorney, 8. viii. 1899.

EURYTOMA Illig.

- E. aethiops** Boh. Bred from galls of *Rhodites eglanteriae*, Notts. (*Rothera*).

- E. curta** Walk. Notts., bred from galls of *Rhodites eglanteriae* (*Rothera*).
E. rosae Nees. Widmerpool, 12. viii. 1914 (*Carr*). Bred by *Rothera* from bedeguar galls (*Rhodites rosae*).
E. rufipes Walk. Notts., bred from galls of *R. rosae* and *R. eglanteriae* (*Rothera*).

ISOSOMA Walk.

- I. verticillata** Fab. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Morley and Carr*).

MEGASTIGMUS Dalm.

- M. bipunctatus** Dalm. Kingston-upon-Soar, 10. viii. 1914 (*Thornley*).
M. dorsalis Fab. } Bred from oak-apple and marble
M. stigmatizans Fab. } (*Cynips kollari*) galls (*Rothera*).

TORYMUS Dalm.

- T. abdominalis** Walk. Bred from oak-apples. Notts. (*Rothera*).
T. auratus Fourc. Bred from oak-apples: also from the rounded hairy galls of *Neuroterus fumipennis* on oak leaves, and from 'oak currant galls' (*Neuroterus lenticularis*). Notts. (*Rothera*).
T. bedeguaris L. From bedeguar galls (*Rhodites rosae*). Notts. (*Rothera*).
T. chloromerus Walk. Bred from galls of *Cecidomyia rosae* on rose leaves. Notts. (*Rothera*).
T. hibernans Mayr. (?) Bred from oak-apples. Notts. (*Rothera*).
T. nigricornis Fab. From oak-apple and marble galls. Notts. (*Rothera*).
T. tipularum Mayr. From galls of '*Nematus gallicola*' on willow leaves (*Rothera*).
T. viridis Först. Bred from the pea-like galls of *Rhodites eglanteriae* on rose leaves. Notts. (*Rothera*).

SYNTOMASPIS Först.

- S. littoralis** Walk. Bred from oak-apple galls. Notts. (*Rothera*).

EUPELMUS Dalm.

E. degeeri Dalm. Crow Wood Hill, West Leake, 9. viii. and 8. ix. 1914 (*Morley and Carr*).

E. urozonus Dalm. Bred from oak-apple galls. Notts. (*Rothera*).

MICROTERTYX Thoms.

M. tessellatus Dalm. Langford Moor near Newark, 14. viii. 1914 (*Morley and Carr*).

SPALANGIA Latr.

S. nigra Latr. Nuthall, one ♀, 1. vii. 1915 (*Robinson*).

LAMPROTATUS Westw.

L. viridis Walk. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914; Sherwood Forest, Edwinstowe, 10. viii. 1914 (*Morley and Carr*).

HALTICOPTERA Spin.

H. patellana Dalm. Several of both sexes bred from larvae of celery-fly, Sneinton, Nottingham, 1910 (*Saunt*).

MESOPOLOBUS Westw.

M. fasciiventris Westw. Bred from galls of *Trigonaspis megaptera* and *Neuroterus funipennis*. Notts. (*Rothera*).

PLATYMESOPUS Westw.

P. tibialis Westw. Bred from oak currant galls (*Neuroterus baccarum*). Notts. (*Rothera*).

DICLADOCERUS Westw.

D. westwoodi Walk. Bred from galls of '*Nematus gallicola*.' Notts. (*Rothera*).

OLYNX Först.

O. gallarum L. Bred from oak-apple galls. Notts. (*Rothera*).

EULOPHUS Geoff.

E. ramicornis Fab. Langford Moor, 14. viii. 1914 (*Morley and Carr*).

ENTEDON Dalm.

E. sosarmus Walk. Bred from oak-apple galls. Notts. (*Rothera*).

TETRASTICHUS Hal.

T. diaphantus Walk. Bred from oak-apple galls. Notts. (*Rothera*).

ICHNEUMONIDAE.

ICHNEUMONINAE.

COELICHNEUMON Thoms.

C. fuscipes Gmel. Treswell Wood, ♂ ♂, 5. viii. 1901 (*Thornley*).
A ♀ bred from larva of *Acronyeta leporina* found at Langford Moor near Newark.

C. leucocerus Grav. Sherwood Forest near Edwinstowe, ♂, June 1912 (*L. A. Carr*).

C. bilineatus Grav. South Leverton, June (*Thornley*).

C. lineator Fab. Clumber Park (*Lady Robinson*).

C. impressor Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

STENICHNEUMON Thoms.

S. trilineatus Gmel. South Leverton, several ♂ ♂ and one ♀ in July 1896-7 (*Thornley*). Hucknall Torkard, 22. viii. 1903.

S. ochropis Gmel. Worksop (*Houghton*).

CRATICHNEUMON Thoms.

C. rufifrons Grav. Nottingham; Aspley Woods, ♂ ♂ common from 28. v. to 4. vii., one ♀ 27. vi.—1912; Crow Wood Hill, West Leake, ♂ ♂, 2. vi. 1913, etc.; Aldercar Wood, Newstead, 13. viii. 1914; Cuckney Hay Wood, Nether Langwith, two ♂ ♂ and one ♀, 19. vi. 1915 (*Carr*). A ♂ bred from pupa found at Langford Moor; Owthorpe, 6. vi. 1914 (*Saunt*).

C. nigritarius Grav. Treswell Wood, ♂, 25. v. 1901 (*Thornley*).

C. dissimilis Grav. Crow Wood Hill, West Leake, 17. v. 1914; Cuckney Hay Wood, Nether Langwith, ♂, 19. vi.; Langford Moor, ♂ ♂, 11. ix.—1915.

- C. fabricator** Fab. South Leverton and Treswell Wood in May and June; Nottingham, 4. vi. 1912; Besthorpe, 13. vi. 1914 (*Thornley*). Owthorpe, 6. vi. 1914 (*Saunt*). Aspley Woods, ♂♂ very common, 28. v.—11. vi. 1912; Strelley, 14. vi. 1899; Southwell; Radcliffe-on-Trent, 29. v. 1912; Worksop; Langford Moor, 14. viii.; Crow Wood Hill, West Leake, 17. vi. and 8. ix.; Aldercar Wood, Newstead, 13. viii.—1914; Thurgarton, ♂♂, 24. viii. 1915.
- C. annulator** Fab. Aspley Woods near Nottingham, ♂♂ very common in May, June and August, 1912; East Leake, 26. v. 1912 and 2. vi. 1915; West Leake, 9. viii.; Radcliffe-on-Trent, 29. v.—1912; Thorney; Sherwood Forest, about Edwinstowe and Ollerton, June and August, 1914; Cuckney Hay Wood, Nether Langwith, 11. viii.; Aldercar Wood, Newstead, 13. viii.—1914; Lambley, 22. viii.; Attenborough, 14. viii.; Roe Wood, Winkburn, 26. vii.—1915 (*Carr*). Hucknall Torkard, 1. vi. 1911; Crow Wood Hill, West Leake, 1. vi.; Arnold, ♀, 17. ix.—1915 (*Robinson*). Tollerton, 1. viii. 1914 (*Saunt*). All the specimens are males with the exception of the Arnold example.
- C. pallidifrons** Grav. Sherwood Forest near Ollerton, June; Crow Wood Hill, West Leake, rather common, 19. v. and 17. vi. 1914.
- C. gravenhorsti** Fonsc. Treswell Wood, one ♀, 1. vi. 1901 (*Thornley*).
- C. lanius** Grav. Strelley; Aspley Woods, several, 18. v. to 11. vi. 1912; East Leake, 26. v. 1912 and 2. vi. 1915; Crow Wood Hill, West Leake, 2. vi. 1913. Males only taken.

MELANICHNEUMON Thoms.

- M. saturatorius** L. Langford Moor, ♂, 25. v. 1913 (*Saunt*).
- M. faunus** Grav. Gotham, ♂, 3. vii. 1915.
- M. sanguinator** Rossi. Thorney, ♀, Aug. 1913 (*L. A. Carr*).

BARICHNEUMON Thoms.

- B. anator** Fab. Worksop (*Lady Robinson*). A ♀ on window in Natural History Museum, Nottingham, 5. vii. 1915.
- B. incubitor** L. Garden, Coppice Road, Nottingham, 25. vii. 1914 (*Thornley*).
- B. basiglyptus** Kr. Langford Moor, one ♂, 11. ix. 1915.

- B. albicinctus** Grav. Langford Moor, ♂ bred from pupa, 1912 (*Saunt*). Aspley Woods, several in May, June and August, 1912; Plumtree, ♀, 3. ix. 1913; Crow Wood Hill, West Leake, 19. v. 1914.
- B. derogator** Wesm. East Leake, ♀, 19. vi. 1912.
- B. bilunulatus** Grav. Flawford near Plumtree, ♂ ♂, 24. viii. 1913 and 9. viii. 1914; Bradmore, 16. v. 1914 (*Saunt*). Beauvale Woods, ♂, 12. vii. 1912; Langford Moor, ♂, 11. ix. 1915.
- B. vestigator** Wesm. Aspley Woods, ♂, 28. viii. 1912; Sherwood Forest near Ollerton, June 1914 (*Carr*). Langford Moor, ♂, 25. v. 1913 (*Saunt*).

ICHNEUMON Linn.

- I. deliratorius** L. Treswell Wood, ♂ ♂, 5. viii. 1901 (*Thornley*). Crow Wood Hill, West Leake, ♂, 9. viii. 1914; Aldercar Wood, Newstead, ♀, 13. viii. 1914 (*Morley and Carr*).
- I. sarcitorius** L. Retford, ♂ (*Pegler*). South Leverton, ♀, May (*Thornley*). Widmerpool, ♀ ♀, 23. vi. 1900.
- I. latrator** Fab. South Leverton, ♀ ♀ (*Thornley*). Owthorpe, 28. viii. 1914 (*Saunt*). Plumtree, ♂, 3. ix. 1913; Sherwood Forest near Ollerton; Crow Wood Hill, West Leake, 19. v.; Cuckney Hay Wood, Nether Langwith, 11. viii.; near Widmerpool, 12. viii.; Langford Moor, 14. viii.—all 1914.
- I. spurius** Wesm. Crow Wood Hill, West Leake, 9. viii. 1914.
- I. suspiciosus** Wesm. Thorney, ♀, Aug. 1913 (*L. A. Carr*).
- I. terminatorius** Grav. South Leverton, ♀ ♀, Sept. 1895 (*Thornley*). Retford (*Pegler*). Winkburn near Southwell.
- I. extensorius** L. South Leverton and Treswell Wood in July and August; Nottingham, 14. v. 1913 and 19. vii. 1915 (*Thornley*). Thorney, ♀; Wigsley, ♂, 7. viii. 1899; Bulwell Forest, ♂ ♂, 20. viii. and 3. ix. 1899; Aldercar Wood, Newstead, 29. vii. 1914 (*Carr*). Owthorpe, 28. viii. 1914; Cotgrave, ♂, 7. ix. 1913 (*Saunt*).
- I. gracilentus** Wesm. Treswell Wood, ♀, 5. ix. 1900 (*Thornley*).
- I. confusorius** Grav. Treswell Wood (*Thornley*). Foss-road, Cotgrave, 6. vi. 1912 (*Saunt*). Aspley Woods; Beauvale Woods; Hucknall Torkard; Aldercar Wood, Newstead; Roe Wood, Winkburn; Sherwood Forest near Edwinstowe; East and West Leake. All males, dates of capture ranging from July 9th to August 13th.

- I. emancipatus** Wesm. Treswell Wood, ♂ ♂, 5. viii. 1901 (*Thornley*).

CHASMIAS Ashm.

- C. motatorius** Fab. Langford Moor, 2. ix. 1911; Bunny, 30. viii.; Owthorpe, 20. ix.—1914 (*Saunt*). Widmerpool, 7. ix. 1913 and 12. viii. 1914; Aspley Woods, 16. vii.; near Newbound Mill, Teversall, 3. viii.—1912; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912 and 11. viii. 1914; all males.

CTENICHNEUMON Thoms.

- C. castigator** Fab. One ♂, Cottam near Retford, 26. vi. 1901.
C. fossorius Grav. Sherwood Forest near Edwinstowe, 12. vi.; Crow Wood Hill, West Leake, 10. viii.—1912.

SPILICHNEUMON Thoms.

- S. occisorius** Fab. Arnold; Linby, 18. ix. 1912.
S. septemguttatus Grav. South Leverton and Treswell (*Thornley*).

AMBLYTELES Wesm.

- A. palliatorius** Grav. South Leverton; Retford; Kingston-upon-Soar (*Thornley*). Bunny, 7. viii. 1911 (*Saunt*). Nottingham; Aspley Woods; East Leake; Cuckney Hay Wood, Nether Langwith; Creswell Crags Quarry; all in August.
 var. *erythropygus*. Arnold.
A. trifasciatus Grav. A ♂ near Newbound Mill, Teversall, 3. viii. 1912.
A. quadripunctorius Müll. Sherwood Forest, ♀, June 1864 (*P. B. Mason, teste Morley*).
A. negatorius Fab. South Leverton (*Thornley*). Treswell, ♂, 15. vii. 1899.
A. subsericans Grav. Cuckney Hay Wood, Nether Langwith, ♀, 19. viii. 1912 (*Carr*). Bulwell, 22. viii. 1914 (*Saunt*).
A. armatorius Först. Worksop (*Lady Robinson*). South Leverton; Treswell Wood, ♂, 21. vii. 1897, and ♀, 27. vi. 1901 (*Thornley*). Epperstone Park, ♂, 9. vi. 1911 (*Saunt*). Stapleford, Sept. 1914 (*J. Dawson*). Nottingham, ♂ ♂, 11. vii. 1913, and ♀, 3. ix. 1915 (*Carr*). Sherwood Forest

near Edwinstowe, ♂, June 1912, and near Ollerton, June 1914; Thorney, ♀, August 1913 (*L. A. Carr*).

A. oratorius Fab. Aldercar Wood, Newstead, 29. vii. 1914.

HEPIOPELMUS Wesm.

H. leucostigmus Grav. Treswell Wood, one ♀, 16. viii. 1901 (*Thornley*).

PROBOLUS Wesm.

P. alticola Grav. South Leverton, three ♀ ♀, Sept. 1895 (*Thornley*).

EURYLABUS Wesm.

E. dirus Wesm. South Leverton, ♀ ♀, July and August 1897 (*Thornley*). Treswell, 15. vii. 1899.

E. tristis Grav. Sherwood Forest near Edwinstowe, ♂, June 1912 (*L. A. Carr*).

PLATYLABUS Wesm.

P. pedatorius Fab. Nottingham, 6. ix. 1911; Aspley Woods, 26. vii. 1912, both sexes.

P. pumilio Holmgr. Flawford near Plumtree, ♂, 24. viii. 1913 (*Saunt*).

STENODONTUS Berth.

S. marginellus Grav. A specimen referred with some doubt to this species by Mr. Morley was taken in Sherwood Forest near Edwinstowe, 12. vi. 1912.

HERPESTOMUS Wesm.

H. brunneicornis Grav. Treswell Wood, one ♀, 21. viii. 1897; garden at Mapperley, Nottingham, ♀, Sept. 1914 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Owthorpe, 20. ix. 1914 (*Saunt*). Crow Wood Hill, West Leake, 17. v. 1914; both sexes bred from cocoons of *Yponomeuta* from a hawthorn hedge at Sherwood, Nottingham, August 1915.

PHAEOGENES Wesm.

P. argutus Wesm. Clumber (*Lady Robinson*). Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Carr*). Bulcote Wood, 16. x.; Cotgrave, 23. x.—1913 (*F. M. Robinson*).

- P. stipator** Wesm. Aspley Woods near Nottingham, several ♀ ♀, 9—28. viii. 1912; Crow Wood Hill, West Leake, 17. v. and 9. viii. 1914.
- P. semivulpinus** Grav. Sherwood Forest near Edwinstowe, ♀, 25. ix. 1913; Aldercar Wood, Newstead, ♂, 13. viii.; Widmerpool, ♂, 12. viii.—1914.
- P. planifrons** Wesm. Aldercar Wood, Newstead, 13. viii. 1914 (*Morley and Carr*).
- P. ophthalmicus** Wesm. Aldercar Wood, Newstead, ♂ ♀, 29. vii.; Crow Wood Hill, West Leake, 9. viii.; Widmerpool, 12. viii.—1914.
- P. fuscicornis** Wesm. Aspley Woods, ♀ ♀, 28. v., 11. vi. and 28. viii. 1912; Crow Wood Hill, West Leake, 9. viii.; Sherwood Forest near Edwinstowe, 10. viii.; Cuckney Hay Wood, Nether Langwith, 11. viii.; Widmerpool, ♀ ♀, 12. viii.; Aldercar Wood, Newstead, 29. vii. and 13. viii.—all 1914 (*Morley and Carr*). Thorney, Aug. 1913 (*L. A. Carr*). Radcliffe-on-Trent, ♀, 24. ix. 1914 (*Robinson*).
- P. trepidus** Wesm. Aldercar Wood, Newstead, several ♀ ♀, 29. vii. and 13. viii.; Cuckney Hay Wood, Nether Langwith, 11. viii.—1914.
- P. infimis** Wesm. Aldercar Wood, Newstead, ♀ ♀ common, 29. vii. and 13. viii. 1914.
- P. ischiomelinus** Grav. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- P. bellicornis** Wesm. Thorney, ♂ ♂, August 1913 (*L. A. Carr*). Sherwood Forest near Ollerton and Edwinstowe, both sexes, June and August 1912-14; Aldercar Wood, Newstead, ♂ ♂, 29. vii. and 13. viii. 1914; Epperstone Park, ♀, 6. ix. 1913; East Leake, ♂, 11. viii. 1912, and ♀, 2. vi. 1915; Crow Wood Hill, West Leake, 17. vi. 1914, and ♀, 10. iv. 1915.
- P. maculicornis** Steph. Aspley Woods, ♂, 26. vii. 1912; Aldercar Wood, Newstead, 29. vii.; Sherwood Forest near Edwinstowe, ♂, 10. viii.—1914; near Newbound Mill, Teversall, ♀, 25. v. 1915.
- P. stimulator** Grav. Retford; Treswell (*Thornley*). Thorney, several ♀ ♀, August 1913; Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Hucknall Torkard, ♂, 22. viii. 1903; West Leake, ♂, 14. vii. 1912; Roe Wood, Winkburn, 25. iv. 1914.

- P. callopus** Wesm. Hucknall Torkard, ♂♂, 22. viii. 1903; Sherwood Forest near Edwinstowe, ♀, 30. viii. 1912, and near Ollerton, June 1914; West Leake, 19. v. 1914 (*Carr*). Arnold, 23. vii. 1914 (*Robinson*).
- P. fulvitaris** Wesm. Near Ollerton, Sherwood Forest, ♀, July 1912 (*L. A. Carr*). Crow Wood Hill and West Leake Hills, 9. viii. and 8. ix. 1914, many ♀♀; Widmerpool, ♀♀, 18. viii.; Epperstone Park, ♀, 6. ix.—1913 (*Carr*). Bulwell, ♀, 22. ix. 1914 (*Robinson*).
- P. coryphaeus** Wesm. East Leake, ♀, 11. viii. 1912.
- P. rusticatus** Wesm. Epperstone Park, ♀♀, 6. ix. 1913; Foss Road near Widmerpool, 12. viii. 1914.

DIADROMUS Wesm.

- D. troglodytes** Grav. Sherwood Forest near Edwinstowe, 10. viii. 1914; Crow Wood Hill, West Leake, ♀♀, 9. viii. and 8. ix. 1914 (*Carr*). Radcliffe-on-Trent, ♂♀, 24. ix. 1914 (*Robinson*).

AETHECERUS Wesm.

- Ae. nitidus** Wesm. Langford Moor, ♂, 16. viii. 1912; Roe Wood, Winkburn, ♂, 26. vii. 1915.
- Ae. discolor** Wesm. Aldercar Wood, Newstead, ♂, 13. viii. 1914.

DICAELOTUS Wesm.

- D. pumilus** Grav. Bassingfield near Gamston, Nottingham, 2. vii. 1914 (*Robinson*). Aldercar Wood, Newstead, 13. viii. 1914; Crow Wood Hill, West Leake, ♀, 10. iv. 1915.
- D. cameroni** Bridg. Crow Wood Hill, West Leake, 24. vii. 1912; Sherwood Forest near Ollerton, June 1914.
- D. rufilimbatus** Grav. The Dumbles, Kirkby-in-Ashfield, ♀, 28. vi. 1913.
- D. parvulus** Grav. Aspley Woods, ♀, 9. vii. 1912.

COLPOGNATHUS Wesm.

- C. divisus** Thoms. Foss Road, Widmerpool, several, 12. viii. 1914.

ISCHNUS Grav.

- I. nigricollis** Wesm. Langford Moor, one ♂, 14. viii. 1914 (*Morley*). This is the first and only specimen Mr. Morley has seen.

NEMATOMICRUS Wesm.

- N. tenellus** Wesm. Glapton near Clifton, one ♂, 15. v. 1915.

ALOMYIA Panz.

- A. debellator** Fab. Worksop (*Lady Robinson*). South Leverton. ♂ ♂ common; Treswell Wood (*Thornley*). Mansfield, 1. vi. 1913 (*Saunt*). Stapleford (*J. Dawson*). Bradmore, 8. ix. 1910 (*Robinson*). Aspley Woods, 28. viii. 1912; Crow Wood Hill, West Leake, 11. ix. 1913; East Leake, 2. vi. 1915. All the foregoing records are of males only. I took a ♀ at East Leake, 19. v., and another in Aspley Woods, 11. vi., 1912.
- var. *nigra*. East Leake, ♂, 26. v. 1912; West Leake, ♂, 12. ix. 1915.

CRYPTINAE.

PLECTOCRYPTUS Thoms.

- P. digitatus** Gmel. Southwell, 10. vi. 1899; Aspley Woods near Nottingham, 28. v. 1912; males only.

CRATOCRYPTUS Thoms.

- C. stomaticus** Grav. East Leake, ♂, 19. vi. 1912.
- C. anatorius** Grav. Treswell Wood near Retford, ♀, 26. iv. 1897 (*Thornley*).

CUBOCEPHALUS Ratz.

- C. oviventris** Grav. South Leverton (*Thornley*). Epperstone Park, 6. ix. 1913; (?) East Leake, 14. vi., and Widmerpool, 18. viii., 1913. The specimens from the last two localities are doubtfully assigned to this species by Mr. Morley.

MICROCRYPTUS Thoms.

- M. perspicillator** Grav. Aspley Woods near Nottingham, 4 and 9. vii.; Crow Wood Hill, West Leake, 24. vii.—1912; Langford Moor, 14. viii. 1914.

- M. improbus** Grav. (?) A ♀ from West Leake Hills, 21. viii. 1913, is doubtfully referred to this species by Mr. Morley.
- M. bifrons** Gmel. Retford (*Thornley*). Sherwood Forest near Edwinstowe and near Ollerton, June 1912-14 (*J. W. and L. A. Carr*).
- M. abominator** Grav. Clumber (*Lady Robinson*). South Leverton (*Thornley*). Arnold; Nuthall; Stapleford (*F. M. Robinson*). Sherwood Forest near Edwinstowe; Aspley Woods; Lambley Dumble; East and West Leake. Both sexes are rather common: dates of capture range from May 17th to Sept. 17th.
- M. galactinus** Grav. Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley and Carr*). Stapleford, 13. viii. 1914 (*Robinson*). Oxtou Bogs, ♂, 14. vii. 1915.
- M. leucostictus** Grav. Aspley Woods, ♀, 28. v. 1912; Sherwood, Nottingham, ♂, 12. vi. 1915.
- M. nigrocinctus** Grav. Sherwood Forest near Edwinstowe and near Ollerton, June 1912-14; Aspley Woods, 28. viii. 1912; Crow Wood Hill, West Leake, with var. *sudeticus*, 9. viii. and 8. ix. 1914; Cuckney Hay Wood, ♂, 19. vi.; Roe Wood, Winkburn, ♂, 26. vii.—1915 (*Carr*). Carlton, ♂, 8. vii.; Gamston, 9. ix.; Arnold, 17. ix.—1915 (*Robinson*).
- M. tricinctus** Grav. Thurgarton, one ♂, 24. viii. 1915.
- M. sperator** Müll. Aspley Woods near Nottingham, ♂, 28. v. 1912 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- M. brachypterus** Grav. Near Park Drain station, Misson, ♂, 22. ix. 1914.
- M. micropterus** Grav. Edwinstowe, Sherwood Forest, ♂ ♀, 10—14. vi. 1912 (*L. A. Carr*). Crow Wood Hill, West Leake, 19. v. and 9. viii. 1914.
- M. labralis** Grav. Aspley Woods near Nottingham, ♂, 16. vii. 1912 (*Carr*). Papplewick, ♂, 5. vi. 1913 (*Robinson*).

ACANTHOCRYPTUS Thoms.

- A. quadrispinosus** Grav. Calverton, ♂, 7. ix. 1915.
- A. nigritus** Grav. Sherwood, Nottingham, in my garden, 27. vii. 1914.

GLYPHICNEMIS Först.

- G. profligator** Fab. South Leverton (*Thornley*). Cinder-hill; Nuthall; Gamston near Nottingham; Hoveringham (*Robinson*). Aspley Woods; Hucknall Torkard; Radcliffe-on-Trent; Chilwell; Thurgarton; East and West Leake; Thorney. A common species: dates range from June 9th to August 24th.
- G. vagabunda** Grav. South Leverton, 20. vii. 1896 (*Thornley*). Thorney, 8. viii. 1899; Hucknall Torkard, ♀ ♀ common, 22. viii. 1903.
- G. suffolciensis** Morl. Arnold; East and West Leake; Sherwood Forest near Ollerton. June 9th to July 26th.
- G. brevis** Grav. Aldercar Wood, Newstead; Cuckney Hay Wood, Nether Langwith; Foss Road near Widmerpool; all 11 to 13. viii. 1914 (*Morley and Carr*). Sherwood, Nottingham, ♂, 12. vi.; Gotham, ♀, 3. vii.—1915 (*Carr*). Arnold, ♂ ♂, 10. vi. 1915 (*Robinson*).
- G. erythrogaster** Grav. Cotgrave; Hoveringham (*Robinson*). Sherwood Forest; Beauvale Woods; near Newbound Mill, Teversall; East and West Leake; Widmerpool. June 6th to August 12th.

PHYGADEUON Grav.

- P. vagans** Grav. Sherwood Forest near Edwinstowe, 10. viii. 1914.
- P. variabilis** Grav. Aspley Woods; Plumtree; East Leake; Crow Wood Hill, West Leake; Upton near Southwell; near Newbound Mill, Teversall; Skegby; Sherwood Forest near Ollerton. All ♂ ♂: May 17th to Sept. 3rd, 1912-15.
- P. dumetorum** Grav. Bassingfield near Gamston, 2. vii. 1914 (*Robinson*).
- P. exiguus** Grav. Bulwell Forest; Gedling; Attenborough; Thurgarton; West Leake; Cuckney Hay Wood, Nether Langwith; near Newbound Mill, Teversall; Warsop; Sherwood Forest near Edwinstowe and Ollerton (*Carr*). Clifton; Strelley; Gamston (*Robinson*). April 21st to Sept. 13th.
- P. marshalli** Bridgm. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*).
- P. hercynicus** Grav. Sherwood Forest near Edwinstowe, 10. viii. 1914 (*C. Morley*). Glapton near Clifton, ♀ ♀, 15. v.; Gedling, 22. v.; Oxtan Bogs, ♀, 14. vii.—1915.

P. brevitarsis Thoms. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

P. fumator Grav. Nottingham; Lambley; Calverton; Thurgarton; East and West Leake; Attenborough; Widmerpool; Oxtun Bogs; near Newbound Mill; Warsop; Sherwood Forest near Edwinstowe and Ollerton; Thorney; Misson; Harworth (*Carr*). Arnold; Strelley; Gamston; Plumtree; Radcliffe-on-Trent; Nuthall (*Robinson*). Tollerton (*Saunt*). May to September: both sexes common.

var. *troglydytes*. Ollerton, June 1914 (*L. A. Carr*).

P. inflatus Thoms. Radcliffe-on-Trent, ♂, 25. v. 1912.

P. dimidiatus Thoms. A ♂ at Sneinton, Nottingham, Sept. 1913 (*Saunt*).

PANARGYROPS Först.

P. pellucidator Grav. Aspley Woods, ♂, 18. v. 1912 (*Carr*). Thorney, ♂, August 1913 (*L. A. Carr*).

ORTHOPELMA Tasch.

O. luteolator Grav. Nottingham district, bred from galls of *Rhodites rosae* and *R. eglanteriae* (*G. B. Rothera*). Also bred from bedeguar galls from Cotgrave and Langar (*Saunt*).

HEMITELES Grav.

H. fulvipes Grav. Warsop, 28. viii. 1915 (*Carr*). Nottingham, bred in numbers from cocoons of *Apanteles* upon larvae of *Pieris brassicae* (*Saunt*).

H. variitarsus Grav. Lambley Dumble, ♂, 18. iv. 1915.

H. necator Grav. Sherwood Forest near Edwinstowe and Ollerton, June 1913-14; Creswell Crags, 22. ix. 1913; East Leake, 4. viii. 1914; Calverton, ♀, 7. ix. 1915.

H. bicolorinus Grav. Worksop (*Houghton*). Thorney, Aug. 1913 (*L. A. Carr*).

H. areator Panz. Treswell Wood (*Thornley*). Sherwood Forest, about Edwinstowe and Ollerton; Thorney; Warsop; Langford Moor near Newark; Nottingham; Aspley Woods; Crow Wood Hill, West Leake. Taken from April 10th to August 19th: ♀ ♀ only.

H. subzonatus Grav. Papplewick, ♀, 9. x. 1913 (*Robinson*). Sherwood Forest near Edwinstowe, 10. viii. 1914; Harworth, ♂, 20. ix. 1915.

- H. limbatus** Grav. Crow Wood Hill, West Leake, 9. viii. 1914.
- H. niger** Tasch. South Leverton, ♂, 10. iv. 1901 (*Thornley*).
Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*).
(?) East Leake, 2. vi. 1915.
- H. tristator** Grav. Cotgrave, ♂, 23. x. 1913 (*Robinson*). Crow Wood Hill, West Leake, 9. viii.; Sherwood Forest near Edwinstowe and Ollerton, June and August,—1914; near Newbound Mill, Teversall, ♂, 25. v. 1915.
- H. similis** Gmel. South Leverton, ♀, Nov. 1897 (*Thornley*). Many specimens bred in August 1914 from the egg-cocoon of a spider (*Zilla* sp.) found at Mapperley, Nottingham, by Rev. A. Thornley. Mapperley Plains near Nottingham. ♂, 22. v.; East Leake, ♂ ♂, 2. vi.—1915 (*Carr*). Crow Wood Hill, West Leake, ♂, 1. vi. 1915 (*Robinson*).
- H. laevigatus** Retz. Warsop, one ♀, 28. viii. 1915.
- H. oxyphimus** Grav. Sherwood Forest near Edwinstowe, ♀ ♀, 30. viii. 1912 and 25. ix. 1913.
- H. aestivalis** Grav. Skegby, a ♂, 25. v. 1915; Cuckney Hay Wood, Nether Langwith, a rather doubtful ♂, 19. vi. 1915.
- H. micator** Grav. Langford Moor near Newark, one ♀, 11. ix. 1915.

PEZOMACHUS Grav.

- P. kiesenwetteri** Fst. Three ♀ ♀, Sherwood Forest near Edwinstowe, 30. viii. 1912.
- P. zonatus** Fst. Langford Moor near Newark; Ollerton, Sherwood Forest; ♂ ♂ only, July and August, 1912.
- P. costatus** Bridgm. Sherwood Forest near Edwinstowe, ♀, 30. viii. 1912.
- P. rufipes** Fst. Sherwood Forest near Edwinstowe, ♀ ♀, 10—14. vi. 1912 (*L. A. Carr*).
- P. aemulus** Fst. Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).
- P. acarorum** L. Bulcote Wood, ♀, 16. x. 1913 (*Robinson*).
- P. attentus** Fst. Sherwood Forest near Ollerton, two ♀ ♀, June 1914 (*L. A. Carr*).
- P. fraudulentus** Fst. Sherwood Forest near Edwinstowe, June 1912 and 10. viii. 1914.

- P. bicolor** Grav. Thorney, ♀, Aug. 1913 (*L. A. Carr*). Sherwood Forest near Edwinstowe, ♀, 25. ix. 1913.
- P. ochraceus** Fst. Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley*).
- P. modestus** Fst. Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*). Langford Moor, 14. viii. 1914 (*Morley and Carr*).
- P. agilis** Grav. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
- P. carnifex** Fst. Grove near Retford (*Thornley*). Epperstone Park, 6. ix. 1913; Langford Moor, 14. viii. 1914 (*Carr*). 'The form *currens* has been taken by Thornley at South Leverton' (*Morley, Brit. Ichn.*, ii. 222).
- var. *rufulus*. Crow Wood Hill, West Leake, several, 8. ix. 1914.
- P. corruptor** Fst. Sherwood Forest near Edwinstowe and Ollerton, June 1912-14; Thorney, ♀, Aug. 1913 (*L. A. Carr*). Edwinstowe, 10. viii.; Crow Wood Hill, West Leake, 9. viii.—1914 (*Morley and Carr*).
- P. instabilis** Fst. Bulwell; West Leake; Fiskerton; Sherwood Forest near Edwinstowe and near Ollerton; Creswell Crags; Langford Moor (*Carr*). My dates range from June 14th to Sept. 25th. One specimen in tuft of grass at Crow Wood Hill, West Leake, 16. i. 1915 (*Saunt*). Arnold, 17. ix. 1915 (*Robinson*).
- P. fasciatus** Fab. Near Retford, two ♂♂ (*S. Pegler*). Sherwood Forest near Edwinstowe, ♀♀, June 1912-14; Thorney, Aug. 1913 (*L. A. Carr*). Tollerton, ♀, 22. v. 1913 (*Robinson*). Park Drain, Misson, 22. ix. 1914.
- P. palpator** Grav. Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).
- P. intermedius** Fst. Sherwood Forest near Edwinstowe, 1. vii. 1911. The form *furax* was taken in Cuckney Hay Wood, Nether Langwith, by Mr. Claude Morley, 11. viii. 1914.

STILPNUS Grav.

- S. gagates** Grav. Sherwood Forest, Edwinstowe, 10. viii. 1914 (*Morley*). Arnold, ♂, 17. vi. 1915 (*Robinson*).
- S. deplanatus** Grav. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

ATRACTODES Grav.

- A. tenebricosus** Grav. (*A. vestalis* Hal.). Near Newbound Mill, Teversall, ♀, 26. vi. 1913; ♂, 25. v. 1915; Crow Wood Hill, West Leake, 8. ix. 1914; Glapton near Clifton, ♂, 15. v.; Attenborough, ♂, 5. vi.; West Leake, ♂, 12. ix.—1915 (*Carr*). Bradmore, ♂, 13. v. 1913 (*Saunt*).
- A. bicolor** Grav. Arnold, one ♀, 26. viii. 1915 (*Robinson*). Lambley, five ♂♂, one ♀, 22. viii.; Calverton, ♂♀, 7. ix.—1915.
- A. gilvipes** Holmgr. Radcliffe-on-Trent, one ♂, 21. vi. 1913.
- A. gravidus** Grav. Thorney, ♀, August 1913 (*L. A. Carr*).
- A. exilis** Hal. East Leake, ♂, 11. viii. 1912; Cuckney Hay Wood, 11. viii.; Widmerpool, 12. viii.—1914; Thurgarton, ♂, 8. v.; Attenborough, ♂, 8. vi.—1915 (*Carr*). Crow Wood Hill, West Leake, ♂, 1. vi.; Edwinstowe, ♂, 13. ix.—1915 (*Robinson*).

EXOLYTUS Holmgr.

- E. laevigatus** Grav. Besthorpe, 13. vi. 1914 (*Thornley*). Crow Wood Hill, West Leake, ♂, 17. v. 1914; near Newbound Mill, Teversall, ♂, 25. v. 1915.
- E. scrutator** Hal. Shireoaks near Worksop, ♂, 20. ix. 1915.

CALLIDIOTES Först.

- C. luridator** Grav. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Oxtun Bogs, ♂, 14. vii. 1915.

PYCNOCRYPTUS Thoms.

- P. peregrinator** L. South Leverton and Retford, June 1900 (*Thornley*). East Leake, 9. vi. 1912.

SPILOCRYPTUS Thoms.

- S. incubitor** Ström. Crow Wood Hill, West Leake, 17. vi. 1914.
- S. fumipennis** Grav. Sherwood Forest near Edwinstowe, 10—14. vi. 1912 (*L. A. Carr*).
- S. abbreviator** Fab. Langford Moor near Newark, 16. viii.; Aspley Woods near Nottingham, 28. viii.—1912.

GONIOCRYPTUS Thoms.

G. titillator L. A ♂ captured at Thorney, 26. v. 1900.

CRYPTUS Fab.

C. tarsoleucus Schr. South Leverton (*Thornley*).

C. lugubris Grav. South Leverton, May 1896 (*Thornley*).

C. obscurus Grav. Crow Wood Hill, West Leake, 2. vi. 1913 (*Carr*). Thorney, August 1913 (*L. A. Carr*).

C. minator Grav. Clumber (*Lady Robinson*).

HABROCRYPTUS Thoms.

H. porrectorius Fab. Treswell Wood, two ♀ ♀, 5. ix. 1900 (*Thornley*). Sherwood Forest near Ollerton, July 1912.

H. brachyurus Grav. 'Professor Carr has, I believe, taken this species at Nottingham College in December' (*Morley*, *Brit. Ichn.*, ii. 319).

PIMPLINAE.

ISCHNOCERUS Grav.

I. rusticus Fourc. Sherwood Forest, Edwinstowe, ♂, 10. viii. 1914 (*Morley*).

XYLONOMUS Grav.

X. pilicornis Grav. South Leverton, a ♀ in June 1902 (*Thornley*).

RHYSSA Grav.

R. persuasoria L. A ♂ at Worksop (*Lady Robinson*). Beeston (*Thornley*). Langford Moor near Newark, two ♀ ♀, June 1898; Nottingham, a very large ♀, 24. vii. 1912.

EPHIALTES Schr.

E. carbonarius Christ. Langford Moor, a ♂, 25. v. 1913 (*Saunt*).

PERITHOUS Holmgr.

P. mediator Fab. East Leake, ♂, 9. vi. 1912; Sherwood Forest near Edwinstowe and Ollerton, June 1912-14;

Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Carr*).
Mapperley, Nottingham, ♀, 12. vii. 1915 (*Thornley*).

PIMPLA Fab.

- P. inquisitor** Scop. Treswell (*Thornley*).
- P. robusta** Morl. East Leake, 11. vii. 1914 (*Saunt*). Clipston Wolds near Plumtree, 12. viii. 1914.
- P. arundinator** Fab. South Leverton (*Thornley*).
- P. brevicornis** Grav. Creswell Crags Quarry; Shireoaks near Worksop; Thorney; Park Drain, Misson; Langford Moor near Newark; Nottingham; Aspley Woods; Bulwell; Arnold; West Leake; Widmerpool; etc. The specimens are all, or nearly all, ♀ ♀, and were taken at various dates from May 15th to September 22nd.
- P. pomorum** Ratz. South Leverton, ♀, May 1897 (*Thornley*). Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley*).
- P. calobata** Grav. Bassingfield near Gamston, 2. vii. 1914 (*Robinson*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley* and *Carr*).
- P. detrita** Holmgr. South Leverton (*Thornley*). Aspley Woods; North Collingham; West Leake; Aldercar Wood, Newstead;—all in August (*Carr*). Nuthall, ♀, 24. v. 1915 (*Robinson*).
- P. instigator** Fab. Nottingham; South Leverton; Kingston-upon-Soar, ♀, August 1914 (*Thornley*). Basford, Nottingham, a ♀ bred from larva of *Dicranura vinula*; Sneinton; Plumtree; Bunny (*Saunt*). Trowell, ♂; Stapleford, ♀ (*Dawson*). Arnold; Hucknall Torkard, 22. viii. 1903; East Leake, 25. v. 1913; Sherwood Forest near Edwinstowe, 10. viii.; Cuckney Hay Wood, Nether Langwith, 11. viii.—1914; Attenborough, ♂, 8. vi.; Calverton, ♂ ♂, 31. viii. and 7. ix.—1915.
- P. arctica** Zett. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Roe Wood, Winkburn, ♂, 26. vii. 1915.
- P. turionellae** L. (incl. *P. examiner* Fab.). South Leverton; Treswell Wood (*Thornley*). Bilborough (*Robinson*). Bradmore; Tollerton (*Saunt*). Nottingham; Aspley Woods; East and West Leake; Radcliffe-on-Trent; Epperstone Park; Newstead; Kirkby-in-Ashfield; near Newbound Mill; Roe Wood, Winkburn; Langford Moor; Thorney; Sherwood Forest near Edwinstowe. Both sexes common: dates range from May 25th to Aug. 28th.

var. *strigilipleuris* Thoms. Edwinstowe, Sherwood Forest, 10. viii. 1914 (*Morley*).

P. maculator Fab. Treswell Wood (*Thornley*). Worksop (*Houghton*). Trowell; Calverton; Bunny; Owthorpe (*Saunt*). Nottingham; Aspley Woods; Lambley; Epperstone Park; Aldercar Wood, Newstead; East and West Leake; Widmerpool; Rolleston; Upton; Roe Wood, Winkburn; Thorney; Sherwood Forest near Edwinstowe and Ollerton. Common: April 3.—Sept. 6.

P. alternans Grav. Aspley Woods; Crow Wood Hill, West Leake; Edwinstowe and Ollerton; near Newbound Mill, Teversall (*Carr*). Calverton (*Saunt*). May 5.—Aug. 28.

P. brassicariae Poda. Retford; Treswell Wood (*Thornley*). Aspley Woods, ♀, 26. vii. 1912.

P. rufata Gmel. Treswell Wood, ♂, 5. viii. 1901 (*Thornley*).

P. oculatoria Fab. Treswell Wood in September (*Thornley*). Beauvale Woods, ♀, 12. vii. 1912.

POLYSPHINCTA Grav.

P. variipes Grav. Mapperley Plains, Nottingham, ♂, 23. viii. 1915 (*Robinson*).

P. percontatoria Müll. Sneinton, Nottingham, June 1914 (*Saunt*). Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Morley*).

ACRODACTYLA Hal.

A. madida Hal. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Lambley, ♀, 22. viii. 1915.

CLISTOPYGA Grav.

C. incitator Fab. Nottingham, a ♀ in my garden, 30. vi. 1912; Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Carr*). Thorney, August 1913; Ollerton (*L. A. Carr*).

GLYPTA Grav.

G. ceratites Grav. A ♂ bred July 11th, 1900, from larva of *Batodes angustiorana* at Worksop (*Lady Robinson*). Near Newbound Mill, Teversall, ♀, 3. viii. 1912; Widmerpool, 12. viii. 1914 (*Carr*). Nuthall, 25. vi. 1914 (*F. M. Robinson*).

G. haesitator Grav. Hoveringham, ♀, 22. vi. 1912 (*Robinson*). Cuckney Hay Wood, Nether Langwith, ♀, 19. vi. 1915.

- G. filicornis** Thoms. (?) A doubtful specimen from Aspley Woods, 9. viii. 1912.
- G. pedata** Desv. Roe Wood, Winkburn, ♀, 26. vii. 1915.
- G. sculpturata** Grav. Laxton, 15. vi. 1906 (*Thornley*). Crow Wood Hill, West Leake, 24. vii. 1912, ♀ ♀ only.
- G. lugubrina** Holmgr. Treswell Wood, 21. vii. 1897 (*Thornley*). East Leake, 9. vi. 1912.
- G. bifoveolata** Grav. Near Newbound Mill, Teversall, ♂ ♂, 3. viii. 1912; Aldercar Wood, Newstead, 29. vii.; Crow Wood Hill, West Leake, 9. viii.—1914.
- G. flavolineata** Grav. Treswell, ♀, 8. ix. 1897 (*Thornley*).

STILBOPS Först.

- S. chrysostoma** Grav. Aspley Woods near Nottingham, ♀, 28. v., ♂, 28. viii., 1912; Crow Wood Hill, West Leake, 17. v. 1914; Sherwood Forest near Ollerton; Thorney (*Carr*). Bradmore, 13. v. 1913 (*Saunt*). Nuthall, 24. v. 1915 (*Robinson*).

LISSONOTA Grav.

- L. lineata** Grav. East Leake, ♂, 19. vi. 1912.
- L. insignita** Grav. Gotham, ♀, 3. vii. 1915.
- L. vicina** Holmgr. I took a ♀ of this exceedingly rare species at Crow Wood Hill, West Leake, 17. v. 1914.
- L. bellator** Grav. Treswell Wood, 15. vi. 1901 (*Thornley*). Nottingham; Widmerpool; Langford Moor; Thorney; Cuckney Hay Wood, Nether Langwith;—common in August and September (*Carr*). Tollerton; East Leake; Owthorpe; Annesley;—June to August 1914 (*Saunt*). Nuthall, 9. vii. 1914; Gamston near Nottingham, 9. ix.; Arnold, 17. ix.—1915 (*Robinson*).
- L. variipes** Desv. Treswell Wood, 15. vi. 1901 (*Thornley*). Arnold, 24. vii. 1913; North Collingham, 25. viii. 1913; East Leake, 4. viii. 1914; Langford Moor, ♂ ♂, 11. ix. 1915 (*Carr*). Mapperley Plains, Nottingham, ♂, 23. viii. 1915 (*Robinson*).
- L. cylindrator** Vill. Bulwell Forest, 3. ix. 1899; Bagthorpe, Nottingham, 26. vii. 1900; Aspley Woods, 26. vii.; Crow Wood Hill, West Leake, common, 24. vii.—1912; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

- L. sulphurifera** Grav. South Leverton, ♀ ♀, April 3rd and September, 1897 (*Thornley*). Nottingham, Sept. 1909; Lambley Dumble, ♂. x. 1912 (*Robinson*). Stapleford, ♀ (*Dawson*). Sherwood Forest near Ollerton, ♂, July; Linby, ♂ ♂, 18. ix. 1912; Calverton, ♂, 7. ix; West Leake, ♂, 12. ix.—1915.
- L. variabilis** Holmgr. Epperstone Park, ♂, 6. ix. 1913 (*Carr*). East Leake, 11. vii. 1914 (*Saunt*).
- L. carbonaria** Holmgr. Aldercar Wood, Newstead, 13. viii. 1914.
- L. segmentator** Fab. Aldercar Wood, Newstead, 29. vii. 1914.

MENISCUS Schiöd.

- M. catenator** Panz. Crow Wood Hill, West Leake, ♀, 14. vi.; the Dumbles near Kirkby-in-Ashfield, ♀. 28. vi.—1913; Cuckney Hay Wood, Nether Langwith, ♂ ♀, 19. vi. 1915 (*Carr*). Owthorpe, 14. vi. 1914 (*Saunt*).
- M. impressor** Grav. Clumber Park (*Lady Robinson*).

ALLOPLASTA Först.

- A. murina** Grav. Treswell Wood, 4. vi. 1900; North and South Leverton, both sexes in May and June, 1901 (*Thornley*). Bradmore; Langford Moor (*Saunt*). Worksop; East Leake, ♀ ♀ common in May.

PHYTODIAETUS Grav.

- P. coryphaeus** Grav. Langford Moor, ♀, 16. viii. 1912; Crow Wood Hill, West Leake, 17. vi. 1914.

LAMPRONOTA Hal.

- L. caligata** Grav. Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*).
- L. melancholica** Grav. Aldercar Wood, Newstead, 29. vii.; Sherwood Forest near Edwinstowe, 10. viii.—1914.

COLLYRIA Schiöd.

- C. calcitrator** Grav. South Leverton and Treswell Wood in May and June (*Thornley*). Attenborough; East and West Leake; Radcliffe-on-Trent; Widmerpool; Upton; both sexes common in May and June (*Carr*). Nuthall, 25. vi. 1914 (*Robinson*).

OEDEMATOPSIS Tschek.

- Oe. scabricula** Grav. Worksop, bred from larva of *Tortrix forsterana* (*Lady Robinson*). Worksop (*Houghton*). Nottingham, in garden at Sherwood Rise, 19. viii. 1912.

BANCHUS Fab.

- B. pictus** Fab. A ♀ bred from pupa found under moss at Langford Moor near Newark, 9. v. 1901 (*Carr*). Three ♀♀ bred by Saunt from pupae found in the same locality in 1912.
- B. falcator** Fab. A ♀ taken in Aldercar Wood, Newstead, 28. vii. 1899.

EXETASTES Grav.

- E. cinctipes** Retz. Worksop (*Lady Robinson*, *Houghton*). South Leverton and Sutton near Retford (*Thornley*). Nottingham, both sexes abundant in gardens in 1912, including a pair taken *in coitu*.
- E. nigripes** Grav., var. *illusor* Grav. Worksop (*Houghton*). Sutton near Retford (*Thornley*). Aldercar Wood, 13. viii. 1914 (*Morley* and *Carr*).
- E. guttatorius** Grav. Nether Langwith, ♂, 28. viii. 1903; Crow Wood Hill, West Leake, ♀, 11. ix. 1913.
- E. laevigator** Vill. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*).

TRYPHONINAE.

CHORINAEUS Holmgr.

- C. cristator** Grav. East and West Leake, in June (*Carr*). Trowell, ♀ (*Saunt*). Kingston-upon-Soar, ♂, 10. viii. 1914 (*Thornley*).
- C. longicornis** Thoms. Treswell Wood, early in June (*Thornley*). East Leake, 2. vi. 1915.

EXOCHUS Grav.

- E. podagricus** Grav. East Leake, 9. vi. 1912; Upton near Southwell, 30. vi. 1913 (*Carr*). Arnold, 10. vi.; Nuthall, 1. vii.—1915 (*Robinson*).
- E. globulipes** Desv. Watnall, 28. v. 1914 (*Robinson*).

E. erythronotus Grav. Sherwood Forest near Edwinstowe, 30. viii. 1912 and 10. viii. 1914.

E. notatus Holmgr. East Leake, 11. vii. 1914 (*Saunt*).

E. tibialis Holmgr. Langford Moor near Newark, 14. viii. 1914 (*Morley and Carr*).

ORTHOCENTRUS Grav.

O. radialis Thoms. Sherwood Forest near Ollerton, vi. 1914 (*L. A. Carr*), and near Edwinstowe, 10. viii. 1914 (*Morley and Carr*).

STENOMACRUS Thoms.

S. laricis Hal. Thorney, ♂, Aug. 1913; Sherwood Forest near Ollerton, vi. 1914 (*L. A. Carr*), and near Edwinstowe, several, 10. viii. 1914 (*Morley and Carr*). Near Newbound Mill, Teversall, ♀, 25. v. 1915.

S. confinis Holmgr. Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley and Carr*).

S. cognatus Holmgr. Widmerpool, 12. viii. 1914 (*Morley and Carr*).

BASSUS Fall.

B. laetatorius Fab. Nottingham; Aspley Woods; Fiskerton; Plumtree; Cuckney Hay Wood, Nether Langwith; July and August (*Carr*). Farnsfield, 3. viii. 1914 (*Saunt*).

B. tricinctus Grav. Nottingham, common in gardens; Aspley Woods; Lambley; Gedling; Thurgarton; Attenborough; Plumtree; Radcliffe-on-Trent; East and West Leake; Linby; near Newbound Mill, Teversall; Langford Moor; Thorney; Worksop; Sherwood Forest near Edwinstowe and Ollerton; etc. Dates of capture range from May 24 to Sept. 18.

B. variicoxa Thoms. The females were very common in my garden at Sherwood Rise, Nottingham, in July and August 1912; Linby, 18. ix. 1912; near Newbound Mill, Teversall, 26. vi. 1913 (*Carr*). Nuthall, 1. vii. 1915 (*Robinson*).

B. annulatus Grav. "I have seen specimens captured by Prof. Carr about Nottingham in July" (*Morley, Brit. Ichneumonids*, v. 87). The Dumbles, Kirkby-in-Ashfield, 28. vi. 1913.

HOMOCIDUS Morley.

- H. cinctus** Grav. South Leverton (*Thornley*). Aspley Woods near Nottingham; Sherwood Forest, about Edwinstowe and Ollerton. Males only: June 10th to Aug. 28th.
- H. bizonarius** Grav. Fiskerton, ♂, 25 vii. 1913.
- H. obscuripes** Holmgr. Worksop (*Houghton*). Sherwood Forest; Thorney; Cuckney Hay Wood, Nether Langwith; Aldercar Wood, Newstead; Nottingham; Attenborough; Thurgarton; East and West Leake; Ruddington; etc. May 15th to August 24th.
- H. pectoratorius** Grav. Aspley Woods, ♂, 9. viii. 1912; Quarry Banks, Linby, 20. vii. 1914; Cuckney Hay Wood, Nether Langwith, several specimens, 19. vi.; Woodborough, 7. ix.—1915 (*Carr*). Epperstone, 17. v. 1914 (*Saunt*).
- H. biguttatus** Grav. Garden at Sherwood, Nottingham, 1 and 10. vi. 1913; Crow Wood Hill, West Leake, 17. v.; Aldercar Wood, Newstead, 13. viii.—1914; near Newbound Mill, Teversall, 25. v. 1915 (*Carr*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Watnall, 28. v. 1914 (*Robinson*). Mapperley, Nottingham, 10. vi. 1915 (*Thornley*).
- H. flavolineatus** Grav. Aspley Woods near Nottingham, ♂ ♀, 4 and 9. vii.; Linby, ♀, 18. ix.—1912.
- H. tarsatorius** Panz. Worksop district (*Lady Robinson*). Worksop, ♀ (*Hodding*). South Leverton, ♂, Aug. 1897; Mapperley, Nottingham, ♂, 13. ix. 1912 (*Thornley*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). East Bridgford, 11. vi. 1914 (*Robinson*). Widmerpool, ♀, 25. ix. 1912; Fiskerton, ♂ ♂, 25. vii. 1913; Lambley Dumble, ♀, 22. v.; Cuckney Hay Wood, Nether Langwith, ♀, 19. vi.—1915.
- H. fissorius** Grav. Crow Wood Hill, West Leake, 17. vi. 1914.
- H. deplanatus** Grav. Bagthorpe, Nottingham, 27. v. 1902; Fiskerton, 25. vii. 1913 (*Carr*). Widmerpool, 12. viii. 1914 (*Morley*). Flawford near Plumtree, 9. viii. 1914 (*Saunt*).
- H. dimidiatus** Schr. Nottingham; Arnold; Gedling; Beauvale Woods; Fiskerton; West Leake; Cuckney Hay Wood; Sherwood Forest; Harworth (*Carr*). Watnall (*Robinson*). Owthorpe (*Saunt*). Both sexes taken: May to September.
- H. pictus** Grav. Nottingham, ♀ ♀, June 1914-15; Crow Wood Hill, West Leake, 17. v. and 17. vi.; Aldercar Wood, Newstead, 29. vii.—1914; Lambley Dumble, ♀, 22. v.;

East Leake, ♀, 2. vi.; Chilwell, ♀, 18. viii.; Gotham, 3. vii.; Calverton, ♀, 7. ix.—1915 (*Carr*). Nuthall, 1. vii.; Carlton near Nottingham, ♀, 8. vii.—1915 (*Robinson*).

H. crassicus Thoms. Sherwood, Nottingham, in my garden, 15. v. 1914.

H. xanthaspis Thoms. Skegby near Mansfield, one ♂, 25. v. 1915.

H. elegans Grav. Fiskerton, ♀, 25. vii. 1913 (*Carr*). Arnold, 23. vii. 1914 (*Robinson*). Widmerpool, 12. viii. 1914 (*Morley*).

H. signatus Grav. Treswell (*Thornley*). Watnall, ♂, 8. vii. 1909; Gamston near Nottingham, ♀, 9. ix.; Edwinstowe, ♀, 13. ix.—1915 (*Robinson*). Linby, ♀ ♀, 19. ix. 1912; Attenborough, ♀, 14. viii. 1913; Crow Wood Hill, West Leake, 19. v. 1914; Lambley, 22. v.; Arnold, ♂, 17. viii.; Warsop, 28. viii.; Calverton, ♀ ♀, 7. ix.—1915.

H. hygrobius Thoms. Near Newbound Mill, Teversall, one ♀, 26. vi. 1913.

ZOOTREPHUS Thoms.

Z. rufiventris Grav. Linby, ♂ ♂ ♀, 18. ix. 1912; Gedling, ♂, 12. vi. 1913; near Newbound Mill, Teversall, ♂ ♂, 26. vi. 1913 and 25. v. 1915; Sherwood Forest near Edwinstowe, 10. viii. 1914; Attenborough, ♂, 5. vi.; Oxtun Bogs, ♂, 14. vii.; Warsop, several specimens, 28. viii.—1915 (*Carr*). Arnold, ♂, 10. vi.; Gamston near Nottingham, ♂ ♀, 9. ix.—1915 (*Robinson*).

PROMETHUS Thoms.

P. sulcator Grav. Treswell Wood, ♀, 8. ix. 1897 (*Thornley*). Owthorpe (*Saunt*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*), and Edwinstowe, ♂, 13. ix. 1915 (*Robinson*). Epperstone Park, ♀, 6. ix. 1913; East and West Leake, 4—9. viii. 1914; near Newbound Mill, Teversall, ♂ ♂, 25. v.; Attenborough, 14. viii.; Thurgarton, ♀, 24. viii.; Warsop, 28. viii.—1915.

P. cognatus Holmgr. Thorney, ♂, August 1913 (*L. A. Carr*). Linby, 18. ix. 1913 (*Robinson*).

P. laticarpus Thoms. Thorney, August 1913 (*L. A. Carr*). Mapperley Plains, Nottingham, 23. viii. 1915 (*Robinson*). Sherwood, Nottingham, several in garden, 15. vi.; near Newbound Mill, Teversall, 25. v.; Thurgarton, common, 24. viii.—1915.

P. dorsalis Holmgr. Thorney, ♂ ♀, August 1913 (*L. A. Carr*).
Fiskerton, ♂, 25. vii. 1913; Chilwell, ♀, 18. viii. 1915.

P. festivus Fab. Kingston-upon-Soar, ♀, August 1914 (*Thornley*). Mapperley Plains, Nottingham, ♀, 23. viii. 1915 (*Robinson*). Attenborough, ♀, 8. vi.; East Leake, two ♂ ♂, 2. vi.; Warsop, twelve ♂ ♂, 28. viii.; Calverton and Woodborough, ♀ ♀, 7. ix.—all 1915.

PHTHORIMUS Först.

P. compressus Desv. Nuthall, 1. vii. 1915, a ♀ of this rare species (*Robinson*).

SPHECOPHAGA Westw.

S. vesparum Curt. Aspley Woods, one ♀, 9. viii. 1912.

MESOLEIUS Holmgr.

M. virgultorum Grav. South Leverton, June 1897 (*Thornley*).
Edwinstowe (*Lady Robinson*).

M. semicaligatus Grav. South Leverton, October 6th; Kingston-upon-Soar, ♂, 10. viii. 1914 (*Thornley*). Langford Moor, ♀, 2. ix. 1911; Widmerpool, ♂, 7. ix. 1913 (*Saunt*). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Morley*). Crow Wood Hill, West Leake, 17. v. 1914; Warsop, 28. viii.; Cuckney, ♂, 20. ix.—1915.

M. armillatorius Grav. West Leake, one ♂, 12. ix. 1915.

M. aulicus Grav. Stragglethorpe near Cotgrave, 27. vi. 1912 (*Robinson*). Linby, ♂, 31. v; Cotgrave, ♀, 21. vi.—1913; Annesley, 15. viii. 1914 (*Saunt*). Garden at 'Mapperley Edge,' Sherwood, Nottingham, ♂ ♀, 11 and 12. vii. 1915.

M. variegatus Jur. Epperstone Park, 17. v. 1914 (*Saunt*). Aldercar Wood, Newstead, 29. vii. 1914; Calverton, a ♀, 7. ix. 1915.

M. haematodes Grav. I captured a ♀ of this rare species in Sherwood Forest, near Edwinstowe, 25. ix. 1913.

M. filicornis Holmgr. Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Morley*).

DYSPETES Först.

D. praerogator L. Treswell Wood, two ♂ ♂, 18. ix. 1897 and 1. vi. 1901 (*Thornley*). Beeston, 13. viii. 1914 (*Robinson*). Bunny, 30. viii. 1914 (*Saunt*). Calverton, ♂, 31. viii. 1915.

TRYPHON Fall.

- T. elongator** Fab. Thorney, 8. viii. 1899; Beauvale Woods, 12. vii.; Aspley Woods, 26. vii. to 9. viii.—1912; Sherwood Forest, common, June 1914; West Leake, 9. viii. 1914; Langford Moor, several ♂♂, 11. ix. 1915.
- T. rutilator** L. Thorney, 8. viii. 1899; East Leake, 9. vi. 1912 and July 1914.
- T. trochanteratus** Holmgr. Crow Wood Hill, West Leake, ♀, 24. vii. 1912.
- T. vulgaris** Holmgr. East Leake, one ♂, 30. vi. 1912.
- T. signator** Grav. North Leverton, 27. v. 1901 (*Thornley*). Widmerpool, ♀, 23. vi. 1900; Radcliffe-on-Trent, ♂, 25. v.; East Leake, ♀, 19. vi.—1912; Crow Wood Hill, West Leake, 2. vi. 1913.
- T. consobrinus** Holmgr. South Leverton and Treswell (*Thornley*). Crow Wood Hill, West Leake, 17. v. 1914.
- T. brunneiventris** Grav. Radcliffe-on-Trent, 29. v. 1912; Crow Wood Hill, West Leake, 2. vi. 1913 and 19. v. 1914.

EXYSTON Schiöd.

- E. cinctulum** Grav. Worksop (*Hodding*).
- E. brevipetiolatum** Thoms. Marshy place near Newbound Mill, Teversall, 26. vi. 1913.

ACROTOMUS Holmgr.

- A. succinctus** Grav. Oxton Bogs, 14. vii. 1915.
- A. mesoleptoides** Steph. Owthorpe, 6. vi. 1914 (*Saunt*).

DIABORUS Först.

- D. lituratorius** L. South Leverton, ♂, May 1897 (*Thornley*).

EXENTERUS Htg.

- E. pictus** Grav. South Leverton, May 1896 (*Thornley*).
- E. flavilabris** Holmgr. Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*). Nuthall, 24. v. 1915 (*Robinson*).
- E. lineola** Steph. Radcliffe-on-Trent, one ♂, 29. v. 1912.

MESOLEPTUS Grav.

- M. indefessus** Grav. Aspley Woods, both sexes, 18—28. v.; Radcliffe-on-Trent, ♀, 29. v.—1912.
- M. typhae** Fourc. Sherwood Forest near Edwinstowe, ♂ ♀, 10—14. vi. 1912 (*L. A. Carr*).
- M. fugax** Grav. Worksop (*Lady Robinson*).
- M. ruficornis** Grav. Sherwood Forest near Edwinstowe, ♂, 12. vi.; Aspley Woods, ♂, 28. viii.—1912; Clipston Wolds near Plumtree, 12. viii. 1914 (*Carr*). Langford Moor, 14. viii. 1914 (*Morley*).
- M. cingulatus** Grav. Worksop district (*Lady Robinson*). Sherwood Forest near Ollerton, ♀, July 1912 (*L. A. Carr*). Aspley Woods, ♀, 4. vii.; near Newbound Mill, Teversall, ♀, 3. viii.—1912.
- M. prosoleucus** Grav. Nuthall, ♀, 1. vii. 1915 (*Robinson*).

CATOGLYPTUS Holmgr.

- C. fortipes** Grav. Treswell Wood, ♀, 15. vi. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, ♂, June 1912 (*L. A. Carr*). Nuthall, 9. vii. 1914 (*Robinson*).
- C. fuscicornis** Gmel. West Leake, one ♂, 23. vi. 1912.

EURYPROCTUS Holmgr.

- E. nemoralis** Fourc. Langford Moor near Newark, one ♀, 13. vii. 1913 (*Saunt*).
- E. atomator** Müll. Side of pond by the spring on Bulwell Forest, several ♀ ♀, 2 and 8. viii. 1912.
- E. lateralis** Grav. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Glapton near Clifton, 15. v.; Gotham, 3. vii.—1915.
- E. notatus** Grav. Sherwood Forest near Edwinstowe, 12. vi. and 30. viii. 1912; Crow Wood Hill, West Leake, 9. viii. 1914.

PERILISSUS Holmgr.

- P. filicornis** Grav. Shireoaks near Worksop (*Lady Robinson*). Both sexes common in Aspley Woods near Nottingham from May 18th to July 26th, 1912; Nottingham, ♂ ♀, August 1913; Radcliffe-on-Trent, ♂ ♂, 29. v.; East Leake, ♂,

26. v.—1912 (*Carr*). Trowell, ♀, 15. vi. 1913; Stapleford, 24. v. 1914 (*Saunt*). Arnold, ♂ ♂, 10. vi. and 17. ix. 1915 (*Robinson*).

P. lutescens Holmgr. Rolleston, one ♀, 25. vii. 1913.

P. rufoniger Grav. Crow Wood Hill, West Leake, 24. vii. 1912 and 17. v. 1914; Gedling, 22. v.; Cuckney Hay Wood, Nether Langwith, 19. vi.—1915 (*Carr*). Papplewick, 5. vi. 1913 (*Robinson*).

P. spilonotus Steph. Sherwood Forest near Edwinstowe, 10—14. vi. 1912 (*L. A. Carr*). West Leake Hills, 15. iv. 1914 (*Thornley*).

P. orbitalis Grav. Arnold, ♂, 17. vi. 1915 (*Robinson*). Cuckney Hay Wood, Nether Langwith, ♀, 19. vi. 1915.

P. naevius Gmel. Mapperley, Nottingham, in garden, ♀, 9. vi. 1912 (*Thornley*). Thorney, ♀, August 1913 (*L. A. Carr*). Radcliffe-on-Trent, ♀, 29. v. 1912; Crow Wood Hill, West Leake, 17. v. and 17. vi. 1914; Sherwood, Nottingham, two ♀ ♀ in my garden, 7. vi. and 11. vii. 1915 (*Carr*). Linby, 28. iv. 1914 (*Robinson*).

P. pictilis Holmgr. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

P. minutus Bridgm. I took a ♂ of this very rare species at East Leake, 2. vi. 1915.

ECLYTUS Holmgr.

E. ornatus Holmgr. Crow Wood Hill, West Leake, one ♀, 10. viii. 1912.

E. fontinalis Holmgr. Fiskerton, ♀, 25. vii. 1912.

PRIONOPODA Holmgr.

P. stictica Fab. Sherwood Forest near Edwinstowe, ♂, 30. viii. 1912.

P. glabra Bridgm. Radcliffe-on-Trent, ♂ ♂, 29. v. 1912.

LATHROLESTUS Thoms.

L. unguularis Thoms. Sherwood Forest near Edwinstowe, 10. viii. 1914 (*Morley*). East Leake, 2. vi.; Cuckney Hay Wood, Nether Langwith, 19. vi.—1915.

MONOBLASTUS Htg.

M. palustris Holmgr. Arnold, 4. vi. 1914 (*Robinson*).

POLYBLASTUS Htg.

P. variitarsus Grav. East Leake, ♂, 19. vi. 1912 (*Carr*).
Langford Moor, ♀, 13. vii. 1913 (*Saunt*). Edwinstowe, ♂,
13. ix. 1915 (*Robinson*).

P. pastoralis Grav. Sherwood Forest near Edwinstowe, ♀,
30. viii. 1912; East Leake, 25. v. 1913; Park Drain, Misson,
22. ix. 1914; Attenborough, 8. vi. 1915 (*Carr*). Arnold,
10. vi. 1915 (*Robinson*).

P. pratensis Grav. Nuthall, 25. vi. 1914 (*Robinson*). Alder-
car Wood, Newstead, 13. viii. 1914 (*Morley and Carr*). Crow
Wood Hill, West Leake, ♂, 14. vi. 1913.

P. marginatus Holmgr. Aspley Woods, 4. vii. 1912.

P. westringi Holmgr. Owthorpe, 20. ix. 1914 (*Saunt*).

ERROMENUS Holmgr.

E. calcator Müll. South Leverton (*Thornley*). Common in
my garden at Sherwood, Nottingham, in May and June.

E. brunnicans Grav. Sherwood, Nottingham, in my garden,
four specimens, 22. v. 1914.

E. punctulatus Holmgr. Nottingham, 12. vi. 1915 (*Robinson*).

E. frenator Grav. Sherwood, Nottingham, in garden, 16. v.;
Aldercar Wood, Newstead, 29. vii.—1914.

GRYPOCENTRUS Ruthe.

G. cinctellus Ruthe. I captured a ♀ of this rare species at
North Collingham, 25. viii. 1913.

OPHIONINAE.

PLECTISCUS Grav.

P. collaris Grav. Crow Wood Hill, West Leake, 8. ix. 1914.

P. communis Fst. Crow Wood Hill, West Leake, ♂, 9. viii.
1914 (*Morley*).

PROCLITIS Först.

- P. socius** Hal. Bulcote Wood, ♀, 16. x.; Cotgrave, two ♀ ♀, 23. x.—1913 (*Robinson*).

MEGASTYLUS Schd.

- M. cruentator** Schd. Near Newbound Mill, Teversall, 25. v. 1915.

DICOLUS Först.

- D. insectator** Fst. Sherwood Forest near Edwinstowe, June 1912 (*L. A. Carr*).

HELICTES Hal.

- H. erythrostomus** Gmel. Crow Wood Hill, West Leake, one ♂, 9. viii. 1914 (*Morley*), and two ♂ ♂, 1. vi. 1915 (*Robinson*). Langford Moor near Newark, 14. viii. 1914; Gedling and Lambley, ♂ ♂, 22. v.; East Leake, ♂ ♂, 2. vi.—1915 (*Carr*). Arnold, ♂, 22. v. 1915 (*Robinson*).
- H. borealis** Holmgr. Thorney, Aug. 1913; Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Cotgrave, ♀, 23. x. 1913 (*Robinson*). Epperstone Park, ♂, 6. ix. 1913; Crow Wood Hill, West Leake, 19. v. 1914; Thurgarton, ♂, 8. v. 1915.

PORIZON Fall.

- P. dissimilis** Grav. Nuthall, 9. vii. 1914 (*Robinson*).
- P. angustipennis** Holmgr. East Leake, ♀, 5. vii.; Arnold, ♀ ♀, 27. vii.—1911 (*Robinson*). Radcliffe-on-Trent, ♀, 25. v. 1912; Sherwood Forest near Edwinstowe, ♂, 25. ix. 1913.
- P. harpurus** Schr. Nuthall, several specimens, 1. vii. 1915 (*Robinson*). Gotham, ♂, 3. vii.; Lambley, ♂, 22. viii.—1915.

DIAPARSUS Thoms.

- D. erythrostomus** Grav. Sherwood Forest near Edwinstowe, ♂, 10—14. vi. 1912 (*L. A. Carr*).
- D. nutritor** Fab. Sherwood Forest near Edwinstowe, 12. vi. 1912; East Leake, 25. v.; near Newbound Mill, Teversall, 26. vi.—1913; all ♂ ♂.

THERSILOCHUS Holmgr.

- T. morionellus** Holmgr. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*).
T. jocator Fab. Sherwood Forest near Ollerton, ♂, June 1914 (*L. A. Carr*). Nuthall, 24. v.; Arnold, 26. viii.—1915 (*Robinson*). Gedling and Lambley, ♂ ♂, 22. v.; near Newbound Mill, Teversall, several ♂ ♂, 25. v.—1915.
T. moderator Holmgr. Attenborough, ♀, 8. vi. 1915.
T. saltator Fab. Nottingham, 19. vi. 1914 (*Robinson*).

CAMPOPLEX Grav.

- C. angustatus** Thoms. Treswell Wood, ♂, 5. viii. 1901 (*Thornley*).
C. terebrator Fst. Langford Moor, ♀, 13. vii. 1913; Annesley, 15. viii. 1914 (*Saunt*).
C. nitidulator Holmgr. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).
C. myrtillus Desv. Sherwood Forest, ♀, June 1908, *E. C. Bedwell* (*Morley, Brit. Ich.*, v. 77).
C. pugillator L. Worksop district (*Lady Robinson*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Aspley Woods near Nottingham, ♀, 28. v. 1912; Crow Wood Hill, West Leake, 17. v. 1914.
C. foveolatus Fst. Sherwood Forest, June 1903, *Tomlin* (*Morley, Brit. Ich.*, v. 80). Langford Moor, ♀ ♀ (*Dawson*). Cuckney Hay Wood, Nether Langwith, ♀, 19. vi.; Oxtun Bogs, ♀, 14. vii.—1915.
C. erythrogaster Fst. Sherwood Forest, near Edwinstowe and near Ollerton, June 1912-14 (*L. A. Carr*).

SAGARITIS Holmgr.

- S. maculipes** Tsch. Aspley Woods, ♀ ♀, 28. viii. 1912.
S. zonata Grav. Sherwood Forest near Ollerton, ♀, July 1912 (*L. A. Carr*). Gotham, ♂, 26. ix. 1912 (*Robinson*). Aspley Woods, ♀, 28. viii. 1912.

CYMODUSA Holmgr.

- C. leucocera** Holmgr. Langford Moor, three ♂ ♂, 28. ix. 1913 (*Saunt*). Edwinstowe, ♂, 13. ix. 1915 (*Robinson*).

CASINARIA Holmgr.

C. pallidipes Brsh. Glapton near Clifton, ♂, 15. v. 1915.

C. claviventris Holmgr. Crow Wood Hill, West Leake, ♂, 24. vii. 1912.

LIMNERIUM Ashm.

L. albidum Gmel. Flawford near Plumtree, a ♂ probably of this species, 24. viii. 1913 (*Saunt*). Aldercar Wood, Newstead, a ♂, also a little doubtful, 29. vii. 1914.

L. annulator Zett. Langford Moor near Newark, one ♀, 11. ix. 1915.

L. rufifemur Thoms. Nottingham, ♀, 22. vii. 1899.

L. xanthostoma Grav. Nottingham, 4. vii. and 19. viii.; Aspley Woods, 28. viii.; Crow Wood Hill, West Leake, 24. vii.—1912. Females only taken.

CANIDIELLA Ashm.

C. exigua Grav. Aspley Woods, ♂, 28. viii. 1912; Attenborough, ♀, 8. vi. 1915 (*Carr*). Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley*).

NEMERITIS Holmgr.

N. cremastoides Holmgr. Thorney, ♀, Aug. 1913 (*L. A. Carr*). Sneinton, Nottingham, 3. v. 1914 (*Saunt*). East Leake, ♀ ♀, 26. v. 1912 and 2. vi. 1915; Crow Wood Hill, West Leake, ♂, 17. v. 1914.

N. sordida Grav. (?) Gedling, ♀, 12. vi. 1913.

N. gracilis Grav. A ♀ bred in 1912 from a pupa found in Sneinton Dale, Nottingham (*Saunt*).

N. lativentris Thoms. Mapperley, Nottingham, ♀, 24. v. 1915 (*Thornley*).

PHOBOCAMPA Thoms.

P. crassiuscula Grav. A ♀ bred from an unknown lepidopterous larva found in Sneinton Dale, Nottingham, in 1912 (*Saunt*). Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Morley*). Crow Wood Hill, West Leake, ♂, 1. vi. 1915 (*Robinson*).

P. uncinata Grav. Near Newbound Mill, Teversall, ♂, 25. v. 1915.

P. bicingulata Grav. Aspley Woods, ♂, 9. vii. 1912.

SPUDASTICA Thoms.

S. krieckbaumeri Bridgm. Worksop (*Lady Robinson*).

ECPHOROPSIS Ashm.

E. viennensis Grav. A specimen, probably of this species, was captured at East Leake, 9. vi. 1912.

E. fuscipes Holmgr. Aspley Woods, 9. viii. 1912; Sherwood Forest near Ollerton, June 1914; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915. Males only taken.

OMORGA Thoms.

O. mutabilis Holmgr. Bulwell Forest, ♂, 8. viii. 1912; Cuckney Hay Wood. Nether Langwith, 11. viii. 1914.

O. faunus Holmgr. Sherwood Rise, Nottingham, several ♀ ♀ in my garden, 8. vii.—19. viii.; Aspley Woods, three ♂ ♂, 9 and 16. vii.—1912; Sherwood Forest near Edwinstowe, ♀ ♀, 30. viii. 1912, and near Ollerton, ♀ ♀, June 1914; Epperstone Park, several ♀ ♀, 6. ix.; West Leake Hills, ♀, 21. viii.—1913; Aldercar Wood, Newstead, ♂ ♀, 29. vii. 1914; near Newbound Mill, Teversall, ♀, 25. v.; Roe Wood, Winkburn, ♀, 26. vii.; Warsop, ♀ ♀, 28. viii.—1915 (*Carr*). Cotgrave, ♀, 8. viii. 1912; Nuthall, 9. vii. 1914 (*Robinson*).

O. difformis Gmel. Nottingham, ♂, 28. vii.; Aspley Woods, ♀, 28. viii.—1912.

O. borealis Zett. Widmerpool, 12. viii. 1914; Thurgarton, ♂, 24. viii. 1915.

O. cursitans Holmgr. Aspley Woods, ♂, 28. viii. 1912 (*Carr*). Arnold, 4. vi. 1914 (*Robinson*). Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

O. lugubrina Holmgr. Aspley Woods, ♂, 28. viii. 1912 (*Carr*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*).

O. ensator Grav. Aspley Woods, ♂, 9. vii. 1912 (*Carr*). Sherwood Forest near Ollerton, ♀, June 1914 (*L. A. Carr*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*). Nuthall, 1. vii. 1915 (*Robinson*).

- O. multicincta** Grav. Sherwood Forest near Ollerton, ♀, July 1912 (*L. A. Carr*). Linby, ♀, 18. ix. 1912 (*Robinson*).

LATHROPLEX Thoms.

- L. infernalis** Grav. East Leake, two ♀ ♀, 2. vi. 1915. An exceedingly rare species, not previously taken in Britain for a great many years.

NEPIERA Thoms.

- N. concinna** Holmgr. Radcliffe-on-Trent, ♂, 29. v.; Cuckney Hay Wood, Nether Langwith, ♂, 19. viii.—1912; Harworth, ♂, 20. ix. 1915 (*Carr*). Nuthall, ♀, 1. vii. 1915 (*Robinson*).

OLESICAMPA Thoms.

- O. fulviventris** Gmel. Sherwood Forest near Ollerton, two specimens, June 1914 (*L. A. Carr*).
- O. pagana** Holmgr. Fiskerton, one ♂, 25. vii. 1913; Calverton, ♀, 7. ix. 1915.
- O. nigroplica** Thoms. Thorney, ♂ ♀, Aug. 1913 (*L. A. Carr*). Sherwood Forest near Edwinstowe, ♂, 12. vi.; Aspley Woods, several ♂ ♂, 27. vi. and 4. vii.—1912.
- O. sericea** Holmgr. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*).

MELOBORIS Holmgr.

- M. dorsalis** Grav. Warsop, 28. viii. 1915, with *M. litoralis*.
- M. rufiventris** Grav. Arnold, 23. vii. 1914 and 26. viii. 1915; Stapleford, 13. viii. 1914 (*Robinson*). Widmerpool, 12. viii. 1914 (*Morley*). Linby, 29. vii. 1914; near Newbound Mill, Teversall, 25. v. 1915.
- M. litoralis** Holmgr. Two ♀ ♀ of this rare species were taken about the ponds at 'Hills and Holes,' Warsop, 28. viii. 1915.
- M. ischnocera** Thoms. Thorney, one ♂ in mid-August 1913 (*L. A. Carr*).
- M. crassicornis** Grav. Bulwell Forest, ♀, 20. viii. 1899; Bagthorpe, Nottingham, by the Day-brook, ♂, 18. vii. 1912 (*Carr*). Strelley, 10. ix. 1914 (*Robinson*). Cuckney Hay Wood, 11. viii. 1914 (*Morley*). Rempstone, ♀, 15. vii. 1915 (*Thornley*).

PECTENELLA Morl.

- P. latungula** Thoms. Aspley Woods, ♂, 28. viii. 1912; near Newbound Mill, Teversall, ♀, 26. vi.; Warsop, ♂, 14. vii.—1913.

ANGITIA Holmgr.

- A. apostata** Grav. Nottingham, one ♀, 19. vi. 1913.
- A. rufipes** Grav. A pair bred from *Tortrix palleana* from Middleton Dale near Worksop, on 25th July 1905, by Lady Robinson (*Morley, Brit. Ich.*, v. 189).
- A. claripennis** Thoms. Calverton, ♀, 7. ix. 1915.
- A. majalis** Grav. Near Newbound Mill, Teversall, ♀, 26. vi.; Fiskerton, ♀, 20. vii.—1913; Glapton near Clifton, ♂, 15. v.; Attenborough, ♀, 14. viii.—1915 (*Carr*). Owthorpe, 6. vi. 1914 (*Saunt*). Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*).
- A. fenestralis** Holmgr. Sherwood Forest near Edwinstowe; Thorney; Bulwell Forest; Fiskerton; Glapton near Clifton; Attenborough; Sherwood, Nottingham; Plumtree; Crow Wood Hill, West Leake (*Carr*). Watnall; Gamston near Nottingham; Cotgrave (*Robinson*). Calverton (*Saunt*). Taken from May 3rd to September 3rd.
- A. chrysosticta** Grav. Roe Wood, Winkburn, ♂, 25. iv. 1914 (*Carr*). Watnall, ♀, 28. v. 1914 (*Robinson*).
- A. tibialis** Grav. Crow Wood Hill, West Leake, ♀, 14. vi. 1913.
- A. curvicauda** Holmgr. North Collingham, ♀, 25. viii. 1913.
- A. interrupta** Holmgr. Aspley Woods, one ♀, 18. v. 1912; Cuckney Hay Wood, ♀, 19. vi. 1915 (*Carr*). Lambley Dumble, ♀, 3. x. 1912; Bassingfield near Gamston, ♀, 2. vii.; Bilborough, ♂, 10. ix.—1914 (*Robinson*).
- A. exareolata** Retz. Epperstone Park, ♂, 6. ix. 1913 (*Carr*). Oxtun, several specimens in June 1914 (*Saunt*).

ANILASTA Thoms.

- A. brischkei** Bridg. Thurgarton, two ♀ ♀, 8. v. 1915.

HETEROPELMA Wesm.

- H. calicator** Wesm. Nottingham, one ♂, 1. vi. 1901; Langford Moor, a ♀ bred from a lepidopterous pupa, 1912 (*Saunt*).

ERIGORGUS Först.

- E. perspicillator** Grav. A ♀ taken in an allotment garden at West Bridgford, Nottingham. (*Morley, Brit. Ich.*, v. p. 236).
- E. fibulator** Grav. Edwinstowe, four ♂♂, two ♀♀, May 22, 1903; also taken at Worksop (*Lady Robinson*).
- E. melanobatus** Grav. 'As early as 10th April, 1909, Lady Robinson sent me a ♂ from Clumber near Worksop' (*Morley, Brit. Ich.*, v. 240). 'Arnold Lane, Nottingham,' a ♀, July 1913 (*F. Hind*).

ANOMALON Jur.

- A. cerinops** Grav. Retford district, *Pegler* (*Morley, Brit. Ich.*, v. 242). A ♂ taken in Nottingham, 1. vi. 1901, is referred, with some doubt, to this species by Mr. Morley.
- A. ruficorne** Grav. Sherwood Forest near Edwinstowe, a ♂, June 1912 (*L. A. Carr*). A very rare species, only recorded previously from the West of England.

LABRORYCHUS Först.

- L. nigricornis** Wesm., var. *perspicuus* Wesm. 'Edwinstowe in May, *Lady Robinson*' (*Morley, Brit. Ich.*, v., p. 247). Retford district, a ♂ (*Thornley*).
- L. tenuicornis** Grav. Langford Moor near Newark, a ♂, 13. vii. 1913 (*Saunt*).

AGRYPON Först.

- A. flaveolatum** Grav. Treswell Wood, 1. vi. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, 10—14. vi. 1912 (*L. A. Carr*). Epperstone Park, 6. ix. 1913; on window of shelter at Rushcliffe Halt near East Leake, 19. v. 1914; Glapton near Clifton, 15. v.; Cuckney Hay Wood, 19. vi.—1915 (*Carr*). Aldercar Wood, Newstead, 13. viii. 1914 (*Morley*). Owthorpe, 18. vii. 1914 (*Saunt*). Mr. Morley remarks (*Brit. Ich.*, v., p. 256) of this species that it is "about only from 16th May to 21st June in my experience—which renders one chary of August records." It will, however, be noticed that Mr. Morley himself took it in Aldercar Wood on August 13th, and identified a specimen captured by me in Epperstone Park as late as September 6th!

OPHION Fab.

- O. luteus** L. Wellow, ♀♀, August 1886 (*Rev. W. Becher*). Worksop (*Lady Robinson*). Sherwood Forest near Ollerton,

June 1914 (*L. A. Carr*). South Leverton, June to September; Mapperley, Nottingham, Sept. 1914 (*Thornley*).

O. distans Thoms. Two ♂♂ in garden at Mapperley, Nottingham, Sept. 1914 (*Thornley*).

O. parvulus Kriech. (?) East Leake, 25. v. 1913.

O. stigmaticus Morl. South Leverton, one ♂, 28. vi. 1900 (*Thornley*). Langford Moor, one specimen captured, one bred from larva of *Trichiosoma lucorum* (*Saunt*).

O. longigena Thoms. A ♂ of this rare specie was taken on the wing at Langford Moor, 2. ix. 1911 (*Saunt*). (*Morley, Brit. Ich.*, v. 272).

O. scutellaris Thoms. South Leverton, one ♀, 5. vi. 1901 (*Thornley*). Wellow, ♀ (*Becher*). Stapleford, ♀ (*Dawson*). Warsop, ♂, 28. viii. 1915.

O. obscurus Fab. South Leverton, both sexes common in September and October (*Thornley*). Nottingham, on gas lamps in Sept. 1899 (*Carr*). Nottingham, ♀, 18. x. 1912, and ♂, 5. x. 1913 (*Saunt*). Arnold, Oct. 1913 (*F. Hind*). Stapleford (*Dawson*).

O. minutus Kriech. Langford Moor, ♀, 25. v. 1913 (*Saunt*). East Leake, two ♂♂, 2. vi. 1915. A rare species.

O. ventricosus Grav. Sherwood Forest near Edwinstowe, one ♀, June 1912 (*L. A. Carr*). A rare species, scarcely known outside the New Forest in Hampshire.

O. undulatus Grav. Worksop, one ♀ (*Houghton*).

PANISCUS Schr.

P. virgatus Fourc. Worksop (*Houghton*). South Leverton and Retford (*Thornley*).

P. latungula Thoms. Laxton, one ♀, 15. vi. 1906 (*Thornley*).

P. cristatus Thoms. Mapperley, Nottingham, ♀, 9. vi. 1912 (*Thornley*). Aspley Woods, ♀, 11. vi.; Sherwood Forest near Edwinstowe, ♂, 12. vi.—1912 (*Carr*). Stapleford, ♂; Foss-road near Cotgrave, ♂ (*Dawson*). Epperstone, 14. vi. 1914 (*Saunt*).

P. melanurus Thoms. South Leverton in June, *Thornley* (*Morley, Brit. Ich.*, v. 294). Bunny, 30. viii. 1914 (*Saunt*).

P. testaceus Grav. Worksop, ♂ ♀ (*Houghton*). Retford, bred from *Cerura vinula* (*Pegler*). South Leverton, June

1896 and 1899 (*Thornley*). I took a ♀ of the form *ocellaris* Thoms. in Sherwood Forest, near Edwinstowe, 25. ix. 1913.

P. gracilipes Thoms. South Leverton, *Thornley* (*Morley, Brit. Ich.*, v. 297). Nottingham, 4. vii. 1914 (*Robinson*).

P. fuscicornis Holmgr. Treswell Wood, one ♂, 25. v. 1901 (*Thornley*).

P. cephalotes Holmgr. South Leverton, a ♂ bred from larva of *Cerura vinula*, July 1898 (*Thornley*).

ABSYRTUS Holmgr.

A. luteus Holmgr. Treswell Wood, ♂ ♀, 16 and 25. v. 1901 (*Thornley*). Sherwood Forest near Edwinstowe, ♀, June 1912 (*L. A. Carr*).

ASTIPHROMMUS Thoms.

A. plagiatus Thoms. Aspley Woods, ♂, 27. vi. 1912.

MESOCHORUS Grav.

M. vitticollis Holmgr. Thorney, ♂, Aug. 1913 (*L. A. Carr*). Near Newbound Mill, Teversall, 25. v.; Arnold, ♂, 17. viii.; Thurgarton, ♀, 24. viii.—all 1915.

M. confusus Holmgr. Edwinstowe, ♂, 13. ix. 1915 (*Robinson*).

M. fuscicornis Brisch. Arnold, one ♀, 22. v. 1915 (*Robinson*).

M. thoracicus Grav. Owthorpe, 6. vi. 1914 (*Saunt*). Alder-car Wood, Newstead, 13. viii. 1914 (*Morley*).

M. vittator Holmgr. West Leake, ♀, 14. vii. 1912 (*Carr*). Bilborough, 10. ix. 1914 (*Robinson*).

M. pectoralis Ratz. Langford Moor near Newark, a ♂, 14. viii. 1914 (*Morley*).

BRACONIDAE.

BRACON Fab.

B. minutator Fab. East Leake, 19. v.; Aspley Woods, 28. v.; Bagthorpe, Nottingham, 18. vii.—1912; West Leake, 9. viii. 1914.

B. fulvipes Nees. Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.

- B. mediator** Nees. South Leverton, ♀ (*Thornley*).
B. caudatus Ratz. Bred from oak-apple galls (*Rothera*).
B. variator Nees. East Leake, ♀ ♀, 9. vi. 1912.
B. anthracinus Nees. Upton near Southwell, ♀, 30. vi.; Epperstone Park, 6. ix.—1913; Aldercar Wood, Newstead, 13. viii.; Widmerpool, 12. viii.—1914; Oxtan Bogs, 14. vii.; Warsop, 28. viii.—1915 (*Carr*). Crow Wood Hill, West Leake, 1. vi. 1915 (*Robinson*).

HECABOLUS Curt.

- H. sulcatus** Curt. Cotgrave, ♀, 21. vi. 1913 (*Saunt*).

RHOGAS Nees.

- R. irregularis** Wesm. Crow Wood Hill, West Leake, ♂, 24. vii. 1912.
R. dimidiatus Nees. (?). Arnold; Cuckney Hay Wood, Nether Langwith; Thorney. July and August.
R. gasterator Jur. Sherwood Forest near Ollerton, June 1914 (*L. A. Carr*). Arnold, 23. vii. 1914 (*Robinson*).
R. circumscriptus Nees. Aspley Woods near Nottingham, common, 18. vi., 4. vii., 9. viii., 1912; Crow Wood Hill, West Leake, 10. viii. 1912 and 17. v. 1914; Aldercar Wood, Newstead, 29. vii. 1914; near Newbound Mill, Teversall, 25. v.; Blyth, 20. ix.—1915 (*Carr*). Bulwell, 22. ix. 1914; Nuthall, 24. v. 1915 (*Robinson*). Calverton, 5. ix. 1914 (*Saunt*).
R. nigricornis Wesm. Aldercar Wood, Newstead, 13. viii. 1914.

SIGALPHUS Latr.

- S. caudatus** Nees. Nottingham, ♀, September 1913 (*Saunt*). Crow Wood Hill, West Leake, 9. viii. 1914 (*Morley and Carr*).

CHELONUS Jur.

- C. inanitus** Fab. East Leake, common, 9 to 19. vi. 1912.

ASCOGASTER Latr.

- A. rufipes** Latr. Langford Moor near Newark, 14. viii. 1914 (*Morley and Carr*).

APANTELES Först.

- A. rubripes** Hal. Crow Wood Hill, West Leake, 9. viii. 1914
(*Morley and Carr*).
A. glomeratus L. Nottingham district, Sherwood Forest, etc.:
bred abundantly from larvae of *Pieris brassicae*.
A. spurius Wesm. Edwalton (*Saunt*).
A. albipennis Nees. Arnold, 10. vi. 1915 (*Robinson*).
A. impurus Nees. Blyth, 20. ix. 1915.

MICROPLITIS Först.

- M. ocellatae** Bouché. Sherwood Forest near Edwinstowe, 10.
viii. 1914 (*Morley and Carr*).
M. vidua Ruthe. Gamston near Nottingham, ♂, 9. ix.;
Edwinstowe, ♂, 13. ix.—1915 (*Robinson*).
M. tristis Nees. Sherwood Forest near Edwinstowe, 10. viii.
1914 (*Morley and Carr*).
M. mediana Ruthe. Cuckney Hay Wood, Nether Langwith,
11. viii. 1914 (*Morley and Carr*).

MICROGASTER Latr.

- M. russatus** Hal. Bulwell Forest, ♀, 8. viii. 1912.
M. globatus Nees. East Leake, 19. vi.; West Leake Hills,
24. vii.—1912.
M. tibialis Nees. Oxtou Bogs, 14. vii. 1915.

AGATHIS Latr.

- A. brevisetis** Nees. Sherwood, Nottingham, 17. v. 1914

MICRODUS Nees.

- M. tumidulus** Nees. Worksop, bred from *Catoptria hypericana*
(*Lady Robinson*). East Leake, ♀, 19. vi. 1912.

EUPHORUS Nees.

- E. pallidipes** Curt. Aspley Woods, 27. vi. and 4. vii. 1912
(*Carr*). Arnold, 22. v. 1915 (*Robinson*).
E. picipes Hal. Sherwood Forest near Edwinstowe, 12. vi. 1912.

METEORUS Hal.

- M. albiditarsis** Curt. A ♀ bred, 1912, from a pupa found at Langford Moor (*Saunt*).
- M. deceptor** Wesm. Nuthall, one ♀, 1. vii. 1915 (*Robinson*).
(?) East Leake, 7. vi. 1913 (*Saunt*).
- M. ictericus** Nees. Worksop (*Lady Robinson*).
- M. filator** Hal. Cuckney Hay Wood, 11. viii.; Aldercar Wood, Newstead, 13. viii.—1914 (*Morley and Carr*). Strelley, 10. ix. 1914 (*Robinson*).

EUBADIZON Nees.

- E. extensor** L. Thorney, a ♂, August 1913 (*L. A. Carr*).
Owthorpe, 18. vii. 1914 (*Saunt*).

PYGOSTOLUS Hal.

- P. sticticus** Fab. Crow Wood Hill, West Leake, 2. vi. 1913;
Thorney, 8. viii. 1899.

BLACUS Nees.

- B. ruficornis** Nees. Thorney, ♀, August 1913 (*L. A. Carr*).

HELCON Nees.

- H. ruspator** L. Bred from *Strangalia quadrifasciata* from log in Sherwood Forest: the second known British specimen (*H. Donisthorpe, in litt.*, 25. vii. 1912).

MACROCENTRUS Curt.

- M. abdominalis** Fab. Many specimens bred from unidentified lepidopterous pupae on birch leaves, Ollerton Forest (*Becher*). Crow Wood Hill, West Leake, 10. viii. 1912; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914 (*Carr*). Nottingham, 2. ix. 1915 (*Robinson*).
- M. marginator** Nees. Worksop (*Lady Robinson*).
- M. thoracicus** Nees. Aspley Woods near Nottingham, both sexes, 28. viii. 1912.
- M. collaris** Spin. Worksop, 8. vi. 1903, three ♀ ♀ bred from *Tortrix* sp. (*Lady Robinson*).

ZELE Curt.

- Z. testaceator** Curt. South Leverton and Treswell Wood
(*Thornley*). Sherwood Forest near Edwinstowe, ♂ ♀, 12.
vi. 1912.

DIOSPILUS Hal.

- D. oleraceus** Hal. Aldercar Wood, Newstead, 13. viii. 1914
(*Morley and Carr*).

OPIUS Wesm.

- O. nitidulator** Nees. Attenborough, 14. viii. 1913; Langford
Moor, 14. viii. 1914.

ALYSIA Latr.

- A. manducator** Panz. Nottingham; Arnold; Linby; Oxtun
Bogs; Worksop; Kingston-upon-Soar; etc. July to
September.

ASPILOTA Först.

- A. ruficornis** Nees. Strelley, 10. ix. 1914 (*Robinson*).

COELINIUS Nees.

- C. niger** Nees. Calverton, ♂, 7. ix. 1915.
C. gracilis Hal. Treswell Wood, 5. viii. 1901 (*Thornley*).
Sherwood Forest near Edwinstowe, 12. vi. 1912.
C. elegans Hal. Cuckney Hay Wood, Nether Langwith, 11.
viii. 1914.

CHAENON Curt.

- C. anceps** Curt. Treswell Wood, ♀, 5. viii. 1901 (*Thornley*).

CHRYSIDIDAE.

CHRYISIS L.

- C. cyanea** L. Sherwood Forest (*Donisthorpe*). Budby, Sher-
wood Forest; Thorney, 8. viii. 1899.
C. viridula L. Treswell and Treswell Wood, frequent about
the burrows of *Odynerus spinipes*, July 1899 (*Thornley and*
Carr).

- C. neglecta** Shuck. Treswell, about the nests of *Odynerus spinipes*, July 1899 (*Thornley and Carr*).
C. pustulosa Ab. South Leverton (*Thornley*).
C. ruddii Shuck. South Leverton, one ♂, June 1896 (*Thornley*).
C. ignita L. Widely distributed and common. At Bagthorpe, Nottingham, it occurred freely about the burrows of *Colletes dariesanus*, and at Treswell Wood it accompanied *C. viridula* about the nests of *Odynerus spinipes*. The Rev. A. Thornley captured some very large specimens at Elkesley, 16. vii. 1900, which appeared to be parasitic on *Odynerus antilope*, and suggests that this may account for their large size.

ELLAMPUS Spin.

- E. auratus** L. South Leverton; Gotham, ♀, 3. vii. 1915 (*Thornley*). Treswell Wood (*Thornley, Carr*). Edwinstowe, Sherwood Forest, 18. vii. 1901 (*Carr*). Owthorpe, 20. ix. 1914 (*Saunt*).

HEDYCHRIDIUM Ab.

- H. minutum** Lep. Langford Moor near Newark.

ACULEATA.

HETEROGYNA.

FORMICIDAE.

The Formicidae or Ants, according to Donisthorpe (*British Ants*, 1915), form a natural family which is divided into five sub-families—(i.) *Ponerinae*, (ii.) *Dorylinae*, (iii.) *Myrmicinae*, (iv.) *Dolichoderinae*, and (v.) *Camponotinae*. Most of the thirty-three British species belong to the third and fifth of these; (ii.) has no British representatives; (i.) and (iv.) are each represented in the British Islands by a single genus, with three species between them. Only the sub-families (iii.) and (v.) occur in Nottinghamshire.

MYRMICINAE.

MYRMICA Latr.

- M. laevinodis** Nyl. Common and widely distributed, nesting under stones, in rotten logs and stumps, etc.

M. ruginodis Nyl. Common and widely distributed, nesting under stones, in rotten logs and stumps, etc.

M. scabrinodis Nyl. Recorded for Notts., but without definite localities.

LEPTOTHORAX Mayr.

L. acervorum Fab. Sherwood Forest (*Bedwell*).

[**Tetramorium guineense** Fab. Mr. W. C. Crawley observed this species in a conservatory at West Leake in 1909, where he says it had been abundant for some years. A single worker was found at Retford by Mr. S. Pegler. A cosmopolitan species introduced into Britain many years ago.]

CAMPONOTINAE.

DONISTHORPEA Mor. and Drnt.

D. fuliginosa Latr. Sherwood Forest, June 1907 (*Donisthorpe*).

D. nigra L. Common in the Nottingham, Mansfield, Newark, Retford and Worksop districts.

D. flava Fab. Creswell Crags and quarry adjoining, common; quarry by Bulwell Wood Hall; West Leake; nests under stones in each case (*Carr*). Cropwell Bishop (*Saunt*). South Leverton, common; Kingston-upon-Soar, winged ♀ ♀ flying each with a ♂ attached, 5. viii. 1909 (*Thornley*).

D. umbrata Nyl. In September 1908 several dealated ♀ ♀ were found wandering on a road [at Tollerton] near Nottingham by W. C. Crawley (*Donisthorpe*).

FORMICA L.

F. rufa L. The large dome-shaped nests of this species are common in fir woods about Thorney and Wigsley (*Carr*). Mansfield, 27. v. 1912 (*Saunt*).

F. fusca L. Creswell Crags quarry, nests plentiful under stones; Langford Moor near Newark (*Carr*). Sherwood Forest (*Donisthorpe*).

[**Plagiolepis alluaudi** Emery. In a greenhouse at Bramcote, introduced with plants.]

NOTE.—Since the remarks on the Ants on page 488 were printed Mr. Donisthorpe's *British Ants* has appeared, and his classification of the Formicidae is adopted here. By treating the 'races' of *Myrmica rubra* as distinct species the number of indigenous Notts. Formicidae is increased to ten.

FOSSORES.

SAPYGIDAE.

SAPYGA Latr.

- S. quinquepunctata** Fab. South Leverton, common on the vicarage walls, June 23, 1902, and following days (*Thornley*).
- S. clavicornis** L. Recorded by J. F. Stephens (*Ent. Mag.*, Jan. 1836, iii. 415) as having been taken near Nottingham by R. Bakewell. This record is repeated by W. E. Shuckard (*Foss. Hym.*, 1837, pp. 47 and 250) with the additional information that both sexes occurred in abundance. There were four specimens, one ♂ and three ♀ ♀, in the late Mr. Hadfield's collection, presumably taken in the Newark district.

POMPILIDAE.

POMPILUS Fab.

- P. plumbeus** Fab. Treswell Wood, July 1899 (*Thornley, Carr*). Worksop, ♀, 27. vii. 1900; Bagthorpe, Nottingham, 26. vii. 1900.
- P. gibbus** Fab. Sherwood Forest near Ollerton; Worksop, ♀ ♀, 27. vii. 1900; Langford Moor, ♀, 10. vi. 1900; Bulwell Forest, ♀, July 1899; Bagthorpe, Nottingham, ♀, 26. vii. 1900.
- P. unguicularis** Thoms. A specimen on window of waiting room at Ollerton station, 10. viii. 1914.

SALIUS Fab.

- S. fuscus** L. Treswell, ♀, 15. v. 1900 (*Thornley*). Thorney, rather common, seven ♀ ♀ captured, 26. v. 1900; Hucknall Road near Bulwell Forest, 1901.
- S. exaltatus** Fab. Langford Moor near Newark, ♀, 29. vi. 1899.
- S. pusillus** Schiöd. Thorney, ♀, Aug. 1899; Bulwell Forest, ♀ ♀, 27. vii. and 1. viii. 1899; Nottingham, 16. viii. 1903; Kinoulton and Widmerpool, several of both sexes, 11. viii. 1900; Crow Wood Hill, West Leake, 24. vii. 1912.
- S. parvulus** Dahlb. Bulwell Forest, very common, 13—25. viii. 1899, 17. vi. and 29. vii. 1900.

SPHEGIDAE.

TRYPOXYLON Latr.

- T. figulus** L. South Leverton, common on leaves, July 1898 (*Thornley*). Worksop (*Houghton*). Treswell, 15. vii. 1899; Budby, Sherwood Forest, 9. vii. 1903; East Leake, 30. vi. 1912; Cuckney Hay Wood, Nether Langwith, 11. viii. 1914.
- T. clavicerum** Lep. Oxtou Bogs, 14. vii. 1915.
- T. attenuatum** Sm. Treswell Wood, 15. vii. 1901 (*Thornley*).

AMMOPHILA Kirb.

- A. sabulosa** L. Langford Moor, ♂ ♂ and ♀ ♀ rather common, June and August, 1899.

SPILOMENA Shuck.

- S. troglodytes** V. de Lind. South Leverton, July 1897 (*Thornley*).

STIGMUS Jur.

- S. solskyi** Mor. Bagthorpe, Nottingham, ♀, 27. vii. 1900; Aspley Woods, 16. vii. 1912; West Leake Hills, ♀, 21. viii. 1913; Sherwood, Nottingham, in my garden, 1. vii. 1915.

PEMPHREDON Latr.

- P. lugubris** Fab. South Leverton, common; Mapperley, Nottingham, 24. v. and 6. vii. 1915 (*Thornley*). Wigsley, 8. viii. 1899; Lowdham, 10. viii. 1899; Aspley Woods, 16. vii. 1912; Beauvale Woods, 12. vii. 1912; Sherwood, Nottingham, 22. v. 1914, common; Sherwood Forest near Ollerton, June 1914 (*Carr*). Arnold Road, Basford, July 1913 (*F. Hind*).
- P. shuckardi** Mor. South Leverton, June 1896 (*Thornley*). Thorney, 8. viii. 1899; Hucknall Torkard, 28. vii. 1899; Bramcote, 29. vii. 1902; Aspley Woods, 28. viii. 1912.
- P. lethifer** Shuck. Nottingham, 28. vii. 1898 and 19. vi. 1900; Hucknall Torkard, 28. vii. 1899; Thorney, 8. viii. 1899; Bramcote, 29. vii. 1902; Aspley Woods, 28. viii. 1912; East Leake, 30. vi. 1912; Attenborough, common, 14. viii. 1913 and 8. vi. 1915; Plumtree, 3. ix. 1913; Sherwood Forest near Edwinstowe and Ollerton, June to Aug. 1912-14; Warsop, 28. viii. 1915 (*Carr*). Kingston-upon-Soar, 8. viii. 1912 (*Thornley*). Bunny, 27. vii. 1913 (*Saunt*).

- P. morio** V. de Lind. Aldercar Wood, Newstead, ♀, 29. vii. 1914; a rather doubtful specimen taken in Nottingham, 3. viii. 1914.

DIODONTUS Curt.

- D. minutus** Fab. Bunny, 27. vii. 1913 (*Saunt*). Mapperley, Nottingham, in garden, ♀, 6. vii. 1915 (*Thornley*).
- D. luperus** Shuck. Bagthorpe, Nottingham, 17. vii. 1900.
- D. tristis** V. de Lind. South Leverton, in vicarage garden, 12. vii. 1900 (*Thornley*). Nottingham, one example in my garden at Sherwood Rise, 6. vii. 1912.

PASSALOEUCUS Shuck.

- P. corniger** Shuck. South Leverton, several, July 1897 (*Thornley*).
- P. insignis** V. de Lind. East Leake, 30. vi. 1912; Sherwood Rise, Nottingham, 6. vii. 1912.
- P. gracilis** Curt. South Leverton, one, July 1897 (*Thornley*). Thorney, 8. viii. 1899; the Dumbles, Kirkby-in-Ashfield, 28. vi. 1913; Oxtun Bogs, 14. vii. 1915 (*Carr*). Bassingfield near Gamston, Nottingham, 2. vii. 1914 (*Robinson*).

MIMESA Shuck.

- M. equestris** Fab. Thorney, ♀, 5. viii. 1899.
- M. bicolor** Jur. Bulwell Forest, very common, burrowing in a bare patch of sandy ground, August 1899; golf-course, Hollinwell, 12. viii. 1903; Cuckney Hay Wood, Nether Langwith, 19. viii. 1912; Thorney, August 1913; Langford Moor, not uncommon, 11. ix. 1915.
- M. unicolor** V. de Lind. Aldercar Wood, Newstead, 13. viii. 1914; Oxtun Bogs, 14. vii. 1915.

PSEN Latr.

- P. pallipes** Panz. South Leverton, common on flowers in garden and on vicarage windows (*Thornley*). Oldcoates, Styrrup, three ♀ ♀, 28. vii. 1900; East Leake, 19. vi. 1912; Barton-in-Fabis, 27. vii. 1912.

GORYTES Latr.

- G. mystaceus** L. Southwell, 10. vi. 1899; East Leake, both sexes rather common, 26. v. 1912; Cuckney Hay Wood, Nether Langwith, 19. vi. 1915.

G. quadrifasciatus Fab. Thorney, ♂, 5. viii. 1899.

NYSSON Latr.

N. spinosus Fab. Edwinstowe, Sherwood Forest, 10—14. vi. 1912 (*L. A. Carr*).

N. dimidiatus Jur. Barrow Hills, Everton, 26. viii. 1904 (*Thornley*).

MELLINUS Fab.

M. arvensis L. Barrow Hills, Everton, a pair, 4. ix. 1903; Langford Moor near Newark, several, 16. viii. 1912, others 11. ix. 1915.

M. sabulosus Fab. "The scarce *Mellinus sabulosus* has been taken at Nottingham by Mr. F. C. Allen of that place" (*F. Smith* in *Entom. Ann.* for 1857, p. 35). Nottingham, *Dr. Howitt* (*Smith*, *Entom. Ann.* for 1859, p. 114). Ramp-ton, a pair on flowers of *Heracleum sphondylium*, 18. vii. 1899; Thorney, a ♀ on flowers of *Angelica sylvestris*, 8. viii. 1899.

OXYBELUS Latr.

O. uniglumis L. South Leverton; Cottam (*Thornley*). Sutton near Retford, in gravel pit; Bulwell Forest; Hucknall Torkard; Bagthorpe, Nottingham; Sherwood Forest near Ollerton—fairly common in all the above localities in July; golf-links, Hollinwell, 12. viii. 1903; Warsop, 28. viii. 1915.

CRABRO Fab.

C. tibialis Fab. East Leake, rather commonly, 19. vi. 1912; the Dumbles, Kirkby-in-Ashfield, two, 28. vi. 1913.

C. clavipes L. South Leverton, 9. vii. 1898; Nottingham, 19. vii. 1913 (*Thornley*). Nottingham, 24. vi.; Aspley Woods, 4. vii.; Bulwell Hall Park, 8. vii.—1912; Sherwood Forest near Edwinstowe, 30. viii. 1912, and near Ollerton, July 1913 (*Carr*). Normanton-on-the-Wolds, 12. viii. 1914 (*C. Morley*). Bassingfield near Gamston, Nottingham, 2. vii. 1914 (*Robinson*).

C. leucostomus L. South Leverton; Treswell Wood, 10. vii. 1899 and 9. viii. 1901; Nottingham, 27. v. 1912, etc. (*Thornley*). Sherwood Forest near Edwinstowe, 30. vii. 1899; Aspley Woods and Beauvale Woods, common, 9—16. vii. 1912; Oxtou Bogs, 14. vii. 1915 (*Carr*). Bleasby, 6. viii. 1912; Cotgrave, 21. vi. 1913 (*Saunt*).

- C. pubescens** Shuck. Aspley Woods, 9. vii. 1912; Langford Moor, ♀, 11. ix. 1915.
- C. cetratus** Shuck. Thorney, 15—19. viii. 1913 (*L. A. Carr*).
- C. capitosus** Shuck. Aspley Woods, 9. vii. 1912.
- C. podagricus** V. de Lind. South Leverton (*Thornley*).
- C. palmipes** L. Bagthorpe and Bulwell Forest, Nottingham, June 17 and 19, and Aug. 8.; East Leake. 30. vi. 1912 (*Carr*). Mapperley, Nottingham, 20. vii. 1913 (*Thornley*). Edwinstowe, 10. viii. 1914 (*Morley*).
- C. varius** Lep. South Leverton; Treswell; Mapperley, Nottingham, 28. vi. 1915 (*Thornley*). Nottingham and Bulwell Forest, on several occasions, June 6, July 8 and 28, Aug. 13, etc.; Sherwood Forest near Edwinstowe, 10. viii. 1914.
- C. wesmaeli** V. de Lind. Nottingham, ♀, 28. viii. 1898.
- C. elongatulus** V. de Lind. South Leverton; Elkesley, four ♀ ♀, 16. vii. 1900; Mapperley, Nottingham, both sexes rather common, 23. vi. 1912, etc. (*Thornley*). Rather common in and about Nottingham, *e.g.*, Sherwood Rise, Bagthorpe, Bulwell Forest, Hucknall Torkard, etc., throughout July; Langford Moor, 11. ix. 1915.
- C. quadrimaculatus** Fab. Sutton near Retford, several ♀ ♀, 19. vii. 1899; Worksop, 27. vii. 1900; Langford Moor near Newark, 12. viii. 1899 and 16. viii. 1912.
- C. dimidiatus** Fab. South Leverton, common; Treswell; Elkesley (*Thornley*). Sherwood Forest near Ollerton; Cuckney Hay Wood, Nether Langwith; common in the Nottingham district, *e.g.*, Nottingham, Bagthorpe, Bulwell Forest, etc.: June 19—July 26.
- [**C. signatus** Panz. Newark district(?) (*Hadfield teste Morice*).]
- C. cavifrons** Thoms. (*C. cephalotes* Sm.). South Leverton. ♀, 20. vii. 1898 (*Thornley*).
- C. chrysostomus** Lep. Grove; South Leverton; Treswell Wood; both sexes not uncommonly (*Thornley*). Aspley Woods; Bulwell Forest; Bestwood Park; Oxtun Bogs; East Leake; Widmerpool; near Newbound Mill, Teversall. Not uncommon: taken from June 9 to Aug. 11.
- C. cribrarius** L. Very common in the sandy district to the north of Nottingham, as at Bagthorpe, Basford, Bulwell Forest, etc.; also about Harby, Thorney and Wigsley;

Sherwood Forest; Worksop; golf-links, Hollinwell; Langford Moor; East Leake; etc. Six ♀ ♀ captured on Bulwell Forest as they were entering their burrows were taking home the following species of Diptera with which to provision their nests:—*Calliphora erythrocephala*, *Hylemyia strigosa*, *Pollenia rudis* (two), and *Thereva nobilitata* (two).

- C. peltarius** Schreb. Langford Moor near Newark. 29. vi. 1899; Bulwell Forest, flying commonly about the furze bushes, 8. vii. 1899 and 17. vi. 1900.
- C. interruptus** De G. Nottingham, in my garden, 4. viii. 1901 (*Carr*). Treswell Wood, 5. viii. 1901 (*Thornley*).
- C. albilabris** Fab. South Leverton (*Thornley*). Bagthore, Nottingham; Bulwell Forest; Worksop; Nether Langwith; Sherwood Forest near Edwinstowe; Thorney; East Leake. Taken from June 30 to Aug. 19.

ENTOMOGNATHUS Dahlb.

- E. brevis** V. de Lind. Worksop, 27. vii. 1900.

DIPLOPTERA.

VESPIDAE.

VESPA L.

- V. crabro** L. The Hornet appears to be very rare in the county. I have only seen a single undoubted Notts. specimen, which was caught by a man engaged in cutting weeds in the river at Ollerton, in 1901. He took it to the Rev. W. Becher, who pinned and set it, and presented it to the Nottingham Natural History Museum.
- V. vulgaris** L. Common throughout the county, and often unpleasantly abundant.
- V. germanica** Fab. Common throughout the county.
- V. rufa** L. Common and generally distributed.
- V. sylvestris** Scop. Treswell and Welham near Retford; Kingston-upon-Soar (*Thornley*). Nottingham; Barton-in-Fabis; Budby, Sherwood Forest, with *V. rufa*; West Burton; Broadholme; Beckingham; Oldcoates, Styrrup; Bunny, abundantly with *V. vulgaris* and *V. germanica*. In all these localities the wasps occurred on the flowers of *Scrophularia aquatica* in July.

- V. norvegica** Fab. A nest in a fir tree at Lenton, Nottingham; a nest in a gooseberry bush. Kirkby-in-Ashfield.

EUMENIDAE.

ODYNERUS Latr.

- O. spinipes** L. South Leverton, ♂, 11. vii. 1898; Treswell Wood, ♀, July 1897 (*Thornley*). In Treswell Wood we found this species in profusion in July 1899, burrowing into the soil among the branches of upturned tree-roots. The beautiful external tubular structures forming the entrances to the burrows were very numerous. The parasites *Chrysis ignita* and *C. viridula* were not uncommon about the burrows. Numerous burrows were also found in the clay banks of the Lea Beck in the village of Treswell; in and about these we caught *Chrysis viridula* and *C. neglecta* (*Thornley* and *Carr*). Sutton near Retford, ♀ ♀, 19. vii. 1899; Strelley near Nottingham, ♂ ♂, 14. vii. 1899; Cinder-hill near Nottingham, ♀, 30. vi. 1903.
- O. callosus** Thoms. South Leverton, common (*Thornley*).
- O. parietum** L. Occurs in every part of the county: I have taken it from June 9 to Aug. 26.
- O. pictus** Curt. Nottingham; South Leverton; Treswell Wood (*Thornley*). Lowdham; Radcliffe-on-Trent. Occurs from May to July.
- O. trifasciatus** Oliv. Treswell Wood; Elkesley, 16. vii. 1900; Mapperley, Nottingham (*Thornley*). Worksop (*Lady Robinson*). Nottingham; Bagthorpe; Strelley; Treswell; etc. May to July.
- O. parietinus** L. South Leverton; Treswell and Treswell Wood; Mapperley, Nottingham, 20. vi. 1912 (*Thornley*). Warsop, 28. viii. 1915.
- O. antilope** Panz. South Leverton; Elkesley, common, nesting in holes in sandstone rock, 16. vii. 1900 (*Thornley*). Harby, 26. v. 1900.
- O. gracilis** Brullé. South Leverton, in vicarage garden, 11. vii. 1900 (*Thornley*). North Wheatley, on flowers of *Scrophularia aquatica*, 13. vii. 1899; rather common with *Vespa sylvestris* on *Scrophularia* at Treswell, 18. vii. 1899.
- O. sinuatus** Fab. South Leverton; Treswell; Treswell Wood (*Thornley*). Worksop (*Houghton*). Aspley Woods; near

Newbound Mill. Teversall; Cuckney Hay Wood, Nether Langwith; Crow Wood Hill, West Leake. July and August.

ANTHOPHILA.

COLLETIDAE.

COLLETES Latr.

- C. succinctus** L. Bulwell Forest, flying over *Erica cinerea*, 25. viii. and 3. ix. 1899.
- C. daviesanus** Sm. South Leverton; Langford Moor; Elkesley (*Thornley*). Worksop (*Lady Robinson*). Bagthorpe, Nottingham, July 1899, both sexes in profusion burrowing in the Bunter sandstone rock at the sides of the road-cutting near the prison; Sutton near Retford, in gravel pit, 19. vii. 1899; Bulwell Forest, 3. ix. 1899; Serooby, 27. vii. 1900; Nottingham, 24. vi. and 6. vii. 1912. At Bagthorpe and Sutton the parasites *Epeolus productus* and *Chrysis ignita* occurred commonly.

PROSOPIS Fab.

- P. communis** Kirb. Common throughout the county, from beginning of June to end of August.
- P. hyalinata** Sm. South Leverton, one, July 1897 (*Thornley*). East Leake, one, 19. vi. 1912; Thorney, Aug. 1913; Sherwood Forest near Ollerton, ♂, June 1914; Cuckney Hay Wood, Nether Langwith, ♀ ♀, 11. viii. 1914.
- P. brevicornis** Nyl. Gotham, ♂ ♀ ♀, 3. vii. 1915 (*Thornley* and *Carr*).
- P. pictipes** Nyl. Treswell Wood, 15. vi. 1901 (*Thornley*). Holbeck, near Creswell Crags, 4. viii. 1903.

ANDRENIDAE.

SPHECODES Latr.

- S. gibbus** L. Treswell; Cottam; Edwinstowe (*Thornley* and *Carr*). Bagthorpe; Basford; Blidworth; Budby, Sherwood Forest; Bunny; Langford Moor; etc. Common: taken from June 10 to Aug. 16.
- S. subquadratus** Sm. Cottam near Retford, about burrows of *Halictus rubicundus*, July 1899 (*Thornley* and *Carr*).

Arnold; Bagthorpe; Bulwell Forest; Budby, Sherwood Forest; Thorney; Langford Moor; Treswell Wood. Common: May to August.

S. pilifrons Thoms. Treswell Wood, July and Sept. (*Thornley*). Bagthorpe, Nottingham; Blidworth; Wigsley; Langford Moor; Bulwell Forest, both sexes very common, June to September.

S. similis Wesm. South Leverton, ♀, 1897 (*Thornley*).

S. ferruginatus Schk. South Leverton, ♂♂, Sept. 1897 (*Thornley*).

S. variegatus v. Hag. Blidworth, ♂, 22. viii. 1899.

S. dimidiatus v. Hag. Langford Moor, ♀, 10. vi. 1900, and ♂♂, 11. ix. 1915; Bulwell Forest, 2. viii. 1912.

S. affinis v. Hag. Blidworth; Sutton near Retford; Thorney Bagthorpe, Nottingham, 19. vi. and 17. vii. 1900.

HALICTUS Latr.

H. rubicundus Chr. Very common and universally distributed: taken from May 7 to Sept. 18.

H. leucozonius Schr. Sherwood Forest near Edwinstowe, 25. ix. 1913.

H. quadrinotatus Kirb. Thorney, 8. viii. 1899 and 26. v. 1900; Blyth and Worksop, 27. vii. 1900; Langford near Newark, ♂♂ common on flowers of *Tanacetum vulgare*, 12. viii. 1899.

H. cylindricus Fab. Common throughout the county: taken from April 23 to October 3.

H. albipes Kirb. Worksop (*Houghton*). Gotham and Kingston (*Thornley*). Flawford near Plumtree; Cotgrave (*Saunt*). Arnold; Bulwell; Linby; near Newbound Mill; Warsop; Bunny; East and West Leake; etc.: June 14 to Sept. 18.

H. subfasciatus Nyl. Near Newbound Mill, Teversall, 3. viii.; Sherwood Forest near Edwinstowe, 30. viii.—1912; West Leake Hills, ♂, 21. viii. 1913.

H. villosulus Kirb. Cottam, 12. vii. 1899; Clarborough, 18. ix. 1901 (*Thornley*). Treswell, 15. vii. 1899; Linby, 18. ix.; West Leake, 23. vi.—1912.

H. punctatissimus Schr. Blidworth, ♂, 22. viii. 1899.

H. nitidiusculus Kirb. South Leverton and Treswell, males common on flowers of *Sonchus* and *Matricaria* (*Thornley*).

Nottingham; Arnold; Bagthorpe; Basford; Bulwell; Hucknall Torkard; Annesley; Beauvale Woods; Gedling; Burton Joyce; Oxtun; Warsop; East and West Leake; etc. April to September, common.

H. minutus Kirb. Bunny, ♂, 23. viii. 1899; (?) Langford Moor, ♀, 11. ix. 1915.

H. atricornis Sm. Sherwood Forest near Edwinstowe, ♂ ♂, 30. vii. 1899; Thorney, 26. v. 1900.

H. tumulorum L. Worksop (*Lady Robinson*). Sturton-le-Steeple, females common on flowers; Clarborough, 18. ix. 1901 (*Thornley*). Bulwell Forest, both sexes common, June to September; Blidworth; Linby, 18. ix. 1912; East Leake, 4. viii. 1914.

H. smeathmanellus Kirb. South Leverton, ♀ ♀, 6 and 11. vi. 1900 (*Thornley*). North Wheatley (*Chamberlin*). Worksop (*Lady Robinson*).

H. morio Fab. Blyth near Worksop, three ♂ ♂, 27. vii. 1900.

H. leucopus Kirb. Gedling, 23. iv. 1899; Arnold; Bulwell Forest; Hucknall Torkard; Blidworth; Thorney;—all in August.

ANDRENA Fab.

A. albicans Kirb. Common throughout the county.

A. rosae Panz. The spring brood, *trimmerana* Kirb., is very common throughout the county.

A. thoracica Fab. East Leake, ♂, 26. v. 1912 (*Carr, teste Morice*).

A. nitida Fourc. North and South Leverton, common, May 1901 (*Thornley*). Gedling, 22. v. 1898.

A. cineraria L. Babworth near Retford (*Pegler*). Langford Moor, abundant, 10. vi. 1900; the Birklands, Sherwood Forest, 25. v. 1904.

A. fulva Schr. Universally distributed and common.

A. clarkella Kirb. South Leverton, ♂, March 1896; Treswell Wood, 5. iii. 1898, and both sexes fairly common, 16. iii. 1899 (*Thornley*).

A. nigroaenea Kirb. Generally distributed: April to June.

A. gwynana Kirb. Generally distributed and not uncommon.

- A. angustior** Kirb. Bilsthorpe, 14. v. 1901; East Leake, 19. v. 1912 (*Carr, teste Morice*).
- A. varians** Rossi. Thorney, ♂ ♂ common, 26. v. 1900; East Leake, ♀, 19. vi. 1912 (*Carr, teste Morice*).
- A. fucata** Sm. Treswell Wood, three ♂ ♂, 4. vi. 1900, two ♀ ♀, 16. v. 1901; Clarborough, 4. vi. 1901 (*Thornley*). Strelley, ♂ ♂ common, 14. vi. 1899; Southwell, 10. vi. 1899; East Leake, 7. vi. 1913.
- A. nigriceps** Kirb. Bulwell Forest, a ♀, 2. viii. 1912 (*Carr, teste Morice*).
- A. denticulata** Kirb. Sherwood Forest near Edwinstowe, 30. vii. 1899; Wigsley and Thorney, 7 and 8. viii. 1899.
- A. humilis** Imh. Bulwell Forest, 11. vi. 1899, both sexes common.
- A. labialis** Kirb. Grove near Retford (*Peyler*). Treswell Wood, both sexes, 4. vi. 1900; North Leverton, ♂ ♂ very abundant amongst gorse, 15. v. 1901: also in another locality in the same parish, both sexes, 18—27. v. 1901; South Leverton, 23. vi. 1902 (*Thornley*).
- A. chrysosceles** Kirb. Common and generally distributed: April to June.
- A. analis** Panz. Langford Moor near Newark, ♂ ♂, 29. vi. 1899.
- A. coitana** Kirb. Thorney, ♀, 8. viii. 1899, and both sexes, Aug. 1913; Linby, 7. viii.; Hucknall Torkard, 22. viii.—1903.
- A. albicrus** Kirb. Clarborough, common at gorse, 30. iv. 1901; North Leverton, 15. v. 1901; Treswell Wood (*Thornley*). Bulwell Forest, ♂ ♂ scarce, ♀ ♀ common, June and July 1899, and ♂ ♂ abundant, 20. v. 1900 and 12. v. 1912; Thorney, both sexes, 26. v. 1900; Langford Moor, both sexes, 10. vi. 1900.
- A. minutula** Kirb. Bagthorpe, Nottingham; Strelley (stylopized); Langford Moor; Widmerpool; East and West Leake. Taken from May 13 to June 30.
- A. nana** Kirb. South Leverton; Treswell (*Thornley*). Cotgrave, 1. vii. 1909 (*Robinson*). Sherwood Forest near Ollerton; Burton Joyce; Southwell; East and West Leake, not uncommon. Taken from May 19 to July 26.
- A. wilkella** Kirb. North and South Leverton and Treswell Wood (*Thornley*). Bulwell Forest, ♂ ♂ very abundant,

3—11. vi. 1899: ♀ ♀, 20. v. 1899 and 12. v. 1912; Burton Joyce, ♂, 27. v. 1899; Widmerpool, ♀, 20. iv.; Thorney, ♀, 26. v.; Langford Moor, ♂ ♂ and ♀ ♀, 10. vi.—1900; Strelley; Bradmore; East and West Leake; etc. (*Carr*). Cuckney Hay Wood, 11. viii. 1914 (*C. Morley*).

NOMADA Fab.

- N. solidaginis** Panz. Wigsley, ♂, 7. viii.; Thorney, ♂, 8. viii.; Langford Moor, ♀, 12. viii.—all 1899.
- N. succincta** Panz. Worksop (*Lady Robinson*). South Leverton; Treswell Wood (*Thornley*). Bagthorpe, Nottingham; Bulwell Forest; Burton Joyce; Widmerpool; Staunton; Broadholme; Thorney. Not uncommon: taken from April 28 to June 19.
- N. alternata** Kirb. Common throughout the county: April to June.
- N. jacobaeae** Panz. Worksop, ♀, 27. vii. 1900.
- N. lathburiana** Kirb. Langford Moor, 10. vi. 1900: ♀ ♀ abundant, flying in company with *Andrena cineraria*.
- N. ruficornis** L. South Leverton; Treswell Wood (*Thornley*). Basford and Bulwell Forest; Southwell; Langford Moor. Frequent, and taken from May 20 to July 8.
- N. bifida** Thoms. Treswell Wood, 7. v. 1900. 4. v. and 1. vi. 1901; South Leverton, in vicarage garden, 17. v. 1900; Clarborough, 4. vi. 1901 (*Thornley*). Worksop (*Houghton*).
- N. borealis** Zett. Treswell Wood, ♂ ♀, May 1897, and 4—9, vi. 1900 (*Thornley*). Worksop (*Houghton*).
- N. ochrostoma** Kirb. Langford Moor, both sexes, 10. vi. 1900; Bulwell Forest near Nottingham, 17. vi. 1900.
- N. fabriciana** L. Clarborough near Retford, not uncommon, 4. vi. 1901 (*Thornley*). Widmerpool, both sexes, 13. v. 1899; Strelley, ♂ ♂, 12. vi. 1899; Epperstone Park, 19. v. 1901; Crow Wood Hill, West Leake, 17. v. 1914.
- N. flavoguttata** Kirb. Strelley, ♂, 14. vi. 1899 (*Carr*). Treswell Wood, 10. vii. 1899 (*Thornley*).

APIDAE.

EPEOLUS Latr.

- E. productus** Thoms. Sutton near Retford, seven ♀ ♀, 19. vii. 1899; Langford Moor, 12. viii. 1899; Worksop, 27. vii.

1900; Bagthorpe, Nottingham, very abundant about the burrows of *Colletes daviesanus*, July 1899, 1900, etc.

E. rufipes Thoms. Blidworth, ♀, 22. viii. 1899.

CHELOSTOMA Latr.

C. florisomne L. South Leverton, June and July 1897; Rampton, 28. vi. 1901; Treswell Wood, 10. vii. 1899 and 27. vi. 1901 (*Thornley*). North Leverton, 11. vii. 1899; Widmerpool, ♂, 23. vi. 1900; Sherwood Forest near Edwinstowe and Ollerton, June and July 1912.

COELIOXYS Latr.

C. rufescens Lep. South Leverton, ♂ ♂, July 1897 (*Thornley*).

C. elongata Lep. Langford Moor near Newark, 29. vi. 1899; Bulwell Forest, Nottingham, on flowers of *Rubus*, 8. vii. 1899.

MEGACHILE Latr.

M. willughbiella Kirb. A ♂ flying in garden at Carrington, Nottingham, 27. vi. 1905; both sexes at Mapperley early in July 1915 (*Thornley*). Several flying in garden at Sherwood Rise, Nottingham, 29. vi. 1911, 6. vii. and 2. viii. 1912 (*Carr*). Owthorpe, 21. vi. 1913 (*Saunt*).

M. circumcincta Lep. South Leverton, ♂, 1896; Mapperley, Nottingham, ♂, 10. vii. 1912 (*Thornley*). Sutton near Retford, ♀, 19. vii. 1899.

M. centuncularis L. South Leverton, common (*Thornley*). Nottingham, ♀ ♀ common on flowers in garden on Mansfield Road, 24. vii. 1898.

OSMIA Panz.

O. rufa L. Worksop (*Lady Robinson, Houghton*). South Leverton; Grove; common (*Thornley*). Nottingham, common. In November 1897 a friend brought me the door-lock of an outbuilding on the Mapperley Road, Nottingham, which was filled with the clay cells and cocoons of this species, about 65 in all. The cells were removed from the lock and placed in a glass-topped box, which was kept in a warm room. On March 15th following the bees began to emerge, five specimens—all males—appearing on that day; nine males emerged on the 16th, four on the 17th, eight on the 18th, four on the 19th, still all males; on the 20th two males and the first female appeared, on the 22nd one

male and the second female, on the 23rd two males, on the 24th two males and one female, on the 26th one male, on the 27th two males, on the 28th one female, and the last two specimens which emerged—a male and a female—appeared on April 1st.

In all, 43 males and 5 females emerged—a remarkable discrepancy in the sexes. Fifteen specimens failed to emerge, and on opening the cocoons a month later they were found to be all dead. Of these nine were males, five were females, and one cocoon contained a dead larva. The nest thus contained about 52 males and only 10 females, and it will be noticed that the mortality among the females was very much higher than among the males. No parasites were present.

A further point of interest is that this bee apparently completes its metamorphosis before the winter sets in, and passes the winter months in the perfect state. I opened one of the cocoons at the time the nest was brought me, and a perfectly-developed ♂ insect crawled out. A week or two later I opened another with the same result.

O. caerulescens L. South Leverton, common; Treswell Wood, 4. vi. 1900; Mapperley, Nottingham, ♂, 21. iv. 1912 (*Thornley*). Sherwood Rise, Nottingham, 10. v. 1912.

MELECTA Latr.

M. armata Panz. Treswell Wood, one, 9. vi. 1900 (*Thornley*).

PODALIRIUS Latr.

P. retusa L. Nottingham (*A. H. Davis in Loudon's Mag. Nat. Hist.*, April 1832, vol. v., pp. 245—248).

P. pilipes Fab. Worksop (*Lady Robinson*). South Leverton; Grove; common (*Thornley*). Nottingham, 17. iv. 1898, 5. vi. 1906, etc.; Staunton, ♂ and ♀, 6. v. 1899; Car Colston and Screveton, both sexes, 11. v. 1912.

PSITHYRUS Lep.

P. rupestris Fab. Retford (*Pegler*). Treswell Wood, males common at flowers, 4. ix. 1900 (*Thornley*).

P. vestalis Fourc. South Leverton and Treswell, April and May 1897—all ♀ ♀ (*Thornley*). Nottingham, ♂ ♂ and ♀ ♀; Gedling, ♀ ♀, 24. iv. to 28. v. 1899; Southwell, 10. vi. 1899; Ollerton district, etc.

P. campestris Panz. Retford, ♂, 1897 (*Pegler*).

P. quadricolor Lep. South Leverton and Grove, near Retford, May 1897 (*Thornley*).

BOMBUS Latr.

B. lapidarius L. Common throughout the county.

B. terrestris L. Common throughout the county.

B. lucorum L. Common throughout the county.

B. pratorum L. Generally distributed and common.

B. ruderatus Fab. Probably common and generally distributed, but a good deal confused with *B. hortorum*. The black variety (*harrisellus* Kirby) is frequent, and has been taken at North Leverton, Treswell, Thorney, Langford Moor, Nottingham, Arnold, Bulwell, Radcliffe-on-Trent, etc.

B. hortorum L. Common and generally distributed.

B. sylvarum L. South Leverton, one worker, 1897 (*Thornley*). Bunny, ♀, 24. v. 1898; Widmerpool, ♀, 20. iv. 1900.

B. agrorum Fab. Common throughout the county.

B. helferanus Seidl. (*B. venustus* of Saunders' Mon.). South Leverton, common; Clarborough (*Thornley*). Ollerton district (*Becher*). Langford Moor (*Saunt*). Kingston and Gotham.

[It is possible that some of these records may belong to *B. muscorum* L., which has not yet been definitely recorded for Nottinghamshire.]

APIS L.

A. mellifica L. Common everywhere, but probably only in a domesticated state.

ARACHNIDA.

The Class Arachnida includes the Scorpions, Spiders, Harvestmen, False-scorpions, Mites and Ticks, besides many less familiar animals. The body is usually distinguishable into two regions, cephalothorax and abdomen, the former representing the fused head and thorax, while the latter is typically divided into a number of segments but in some Orders is unsegmented. The cephalothorax bears a varying number of usually simple eyes, two pairs of jointed appendages—the chelicerae and pedipalpi—and four pairs of legs; no antennae are present. Most Arachnids breathe by means of tubular tracheae or by ‘lung-books,’ opening to the exterior by slit-like apertures or stigmata situated in the anterior part of the underside of the abdomen. A lung-book consists of a series of leaf-like plates resembling the leaves of a book and sunk in a pit or depression on the ventral surface of the body. In many Spiders both tracheae and lung-books are present. The Arachnids are dioecious, the sexes being separate, and there is usually no metamorphosis.

The Class comprises a number of Orders, four of which are represented in Nottinghamshire, viz.: the *Araneae*, the *Opiliones*, the *Chernetidea*, and the *Acarina*.

ARANEAE (*Spiders*).

Spiders may be readily distinguished from insects by the following characters among others: In insects the body is clearly divided into three separate regions—head, thorax and abdomen, the last-named being distinctly segmented, while in spiders the head and thorax are completely fused together, forming the cephalothorax, which is connected with the abdomen by a short stalk or pedicle; only two distinct parts are therefore visible; the abdomen is not segmented. The eyes of spiders are simple, while insects usually possess compound eyes, although many have simple eyes in addition. Insects have three pairs of legs, spiders possess four pairs. In front of the walking legs all spiders possess two pairs of jointed appendages; the anterior of these are called the chelicerae or falces, and are formidable claw-like pointed fangs, each containing a poison-gland; these are used for seizing and killing the prey. The hinder pair are the pedipalps or palpi; they lie on either side of the mouth, and the basal part of each (the maxilla) is used as a masticatory organ, while the remaining portion forms the palpus or feeler; the

terminal joint of this is, in the male spider, modified into an accessory organ of reproduction. The terminal joint, or tarsus, of each of the eight legs ends in either two or three curved claws, and in some spiders there is on the last joint but one (metatarsus) of the fourth pair of legs a peculiar comb-like organ termed the calamistrum, consisting of a longitudinal row of curved bristles.

The silken lines which all spiders produce are emitted from a group of six nipple-like 'spinnners' situated on the underside of the hind end of the abdomen. In those spiders which possess a calamistrum there is also, immediately in front of the spinnners, a paired organ, the so-called 'cribellum,' perforated by numerous fine pores through which silk is emitted and combed out by the calamistrum so as to become flocculent, and to assist in the entanglement of their prey.

Unlike most insects, spiders undergo no metamorphosis, but they moult or cast their skin several times before reaching the adult state. All spiders are carnivorous, preying upon other animals, chiefly insects, which they capture either by leaping suddenly upon them, or more commonly by spinning webs or snares in which the insect prey becomes entangled.

The majority of the species recorded below were collected by myself in the years 1903-4-5. Valuable assistance was rendered by the late Rev. T. C. B. Chamberlin, M.A., Rector of Wheatley near Retford, who collected most indefatigably in the north of the county; several good species were also sent me from Sherwood Forest by the late G. W. Chaster, M.R.C.S. In 1912 Dr. A. Randell Jackson and Mr. L. A. Carr visited Sherwood Forest and added many new species to the county records. For the determination of the Nottinghamshire spiders we are indebted to the Rev. O. Pickard-Cambridge, F.R.S. and Dr. Randell Jackson, who between them have examined every species here recorded.

About 540 species of spiders occur in the British Islands. The Notts. list comprises 207 species.

DYSDERIDAE.

The spiders of this Family have six eyes, and two pairs of stigmatic openings situated near the anterior end of the ventral surface of the abdomen, the openings of each pair being in close proximity to one another; the anterior pair communicate with book-lungs, the posterior pair with tubular tracheae. The external genitalia in both sexes are extremely simple in structure.

DYSDERA Latr.

- D. crocota** C. L. Koch. Headon near Retford (*Chamberlin*). Nottingham, 25. iv. 1906.

A large and handsome spider with chestnut-red cephalothorax and legs, and dull yellow elongated abdomen; there are two tarsal claws, and the eyes are arranged in the form of a horse-shoe with the ends directed forward.

HARPACTES Templ.

- H. hombergii** Scop. Sherwood Forest near Edwinstowe, frequent under bark of old oaks.

Known by its slender somewhat ant-like form, nearly black cephalothorax and pale abdomen, three tarsal claws, and eyes arranged in a circle.

SEGESTRIA Latr.

- S. senoculata** L. Not uncommon under loose bark of old trees and palings. Colwick Park; Oxtou Bogs; Calverton Hill; Lambley; Southwell; Widmerpool; Langford Moor near Newark; Sherwood Forest near Edwinstowe; etc.

A slender elongated spider, easily recognised by the black diamond-shaped patches on a dull buff ground on the dorsal surface of the abdomen, the three tarsal claws, and the arrangement of the eyes, which are grouped in three pairs, the central pair being placed transversely and the two lateral pairs longitudinally.

OONOPIDAE.

A Family of very small spiders, badly represented in Europe. In the arrangement of their stigmatic openings, the number of their eyes, and their simple sexual organs, they agree with the Dysderidae; they differ from them markedly, however, in the structure of their mouth-parts and their feet.

OONOPS Templ.

- O. pulcher** Templ. Nottingham, among dead leaves, etc., in garden; Lambley; Sherwood Forest near Edwinstowe and Ollerton, under loose bark of old oaks.

Recognisable by its small size (one-twelfth of an inch or less in length), orange-red colour, large oval pearly eyes, and two tarsal claws.

DRASSIDAE.

Mostly hairy spiders of elongated form and sombre colour, with eight eyes in two transverse rows, and two tarsal claws; the spinners of the anterior pair are widely separated at the base.

DRASSODES Westr.

D. lapidosus Walck. (incl. *D. cupreus* Bl.). Barrow Hills, Everton; Oxtou Bogs, under bark of palings; Sherwood Forest near Edwinstowe, under logs, etc.

D. pubescens Thor. Bulwell Forest; Blidworth.

D. troglodytes C. L. Koch. Sherwood Forest, 13. vi. 1904.

SCOTOPHAEUS Sim.

S. blackwallii Thor. North Wheatley (*Chamberlin*). South Leverton (*Thornley*). Strelley, under loose bark on palings; Lambley. A dark hairy spider often found on the walls of houses and outbuildings at night.

PROSTHESIMA L. Koch.

P. petiverii Scop. Clipstone, Sherwood Forest, running on road, 21. viii. 1905.

CLUBIONIDAE.

These spiders resemble the Drassidae in the number and arrangement of the eyes and the possession of two tarsal claws on each foot. They differ from them in the structure of the mouth parts and spinners, the anterior pair of spinners being closely approximated at the base.

CLUBIONA Latr.

C. reclusa Cambr. Under bark of trees and palings: Calverton Hill; Widmerpool; Sherwood Forest near Edwinstowe.

C. terrestris Westr. Under bark of trees and palings: Wollaton; Calverton Hill; Sherwood Forest.

C. lutescens Westr. Widmerpool, under bark of old palings; Sherwood Forest near Edwinstowe.

C. neglecta Cambr. Sherwood Forest near Edwinstowe, ♂, June 1912 (*L. A. Carr*).

- C. holosericea** De G. Under bark of old palings, etc. : Goose-dale Bog ; Oxtou Bogs ; Budby Carr, Sherwood Forest.
- C. pallidula** Clerck. Common under bark : Nottingham ; Colwick ; Arnold ; Lambley ; Oxtou Bogs ; Southwell ; Worksop ; Wheatley.
- C. diversa** Camb. Sherwood Forest near Edwinstowe, one ♂, June 1912 (*L. A. Carr*).
- C. trivialis** L. Koch. Sherwood Forest, ♂ ♂, June 1912 (*Jackson*).
- C. brevipes** Bl. South Leverton (*Thornley*). Roe Wood, Winkburn ; Widmerpool, under bark of old palings ; Langford Moor ; Sherwood Forest near Edwinstowe, common.
- C. comta** C. L. Koch. Epperstone Park ; West Leake Hills ; Roe Wood, Winkburn ; Langford Moor near Newark ; Wigsley Wood ; Sherwood Forest near Edwinstowe.
- C. corticalis** Walck. Common everywhere under bark of trees and old palings.

CHIRACANTHIUM C. L. Koch.

- C. carnifex** Fab. (?) Gotham Hills, 9. vii. 1906, too immature for identification to be certain.

ANYPHAENA Sund.

- A. accentuata** Walck. Epperstone Park ; Eakring Brail Wood ; Dilliner Wood, Eakring ; Roe Wood, Winkburn ; Langford Moor ; Sherwood Forest ; Wigsley Wood.

AGROECA Westr.

- A. brunnea** Bl. Langford Moor, a ♀ under bark, 24. iv. 1904.

ZORA C. L. Koch.

- Z. maculata** Bl. (*Z. spinimana* Bl.). Langford Moor near Newark ; Eakring Brail Wood ; Roe Wood, Winkburn ; Sherwood Forest, about Edwinstowe and Ollerton.

PHRUROLITHUS C. L. Koch.

- P. festivus** C. L. Koch. Quarry near Bulwell Wood Hall, 22. viii. 1903.

MICARIA C. L. Koch.

M. pulicaria Sund. Langford Moor near Newark; Sherwood Forest near Edwinstowe.

A very beautiful and brilliant little spider, dark coloured, shining and iridescent.

THOMISIDAE.

The spiders of this Family have a short and broad cephalothorax and abdomen and laterally extended legs. This crab-like shape is accompanied by a crab-like motion, the species moving freely either forwards, backwards or sideways. There are eight eyes in two rows, arranged in a semicircle or crescent with the convexity directed forwards. Tarsal claws two. No web or snare is constructed.

DIAEA Thor.

D. dorsata Fab. Langford Moor near Newark, beaten from firs, 30. vi. 1904. A lovely species in which a clear pale green is the prevailing colour.

XYSTICUS C. L. Koch.

X. cristatus Clerck. Common and generally distributed throughout the county. The most abundant of the 'crab-spiders.'

X. pini Hahn. Langford Moor near Newark, beaten commonly from fir and other trees, 30. vi. and 19. viii. 1904.

X. lanio C. L. Koch. Wigsley Wood, beaten from trees, 16. vii. 1904; Roe Wood, Winkburn, 8. viii. 1904; Laxton; Sherwood Forest near Edwinstowe.

X. erraticus Bl. One ♀ in Sherwood Forest, 13. vi. 1904 (*Chaster*).

X. ulmi Hahn. Roe Wood, Winkburn, 8. viii. 1904.

OXYPTILA Sim.

O. praticola C. L. Koch. Edwards Lane, Nottingham, a ♀ under piece of bark in hedge bottom; Colwick Wood, in moss; Lambley Rectory garden; Linby, under stones; North Wheatley near Retford; etc.

O. flexa Camb. Sherwood Forest near Ollerton, adults of both sexes as well as immature examples, July 1912 (*L. A. Carr*).

- O. trux** Bl. Eakring Brail Wood, 6. vii. 1904; Sherwood Forest, June 1912.

PHILODROMUS Walck.

- P. dispar** Walck. South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Sherwood Forest, adults of both sexes, June 1912.
- P. aureolus** Clk. Very common on various trees, gorse, heather, etc., throughout the county.
- P. cespiticolis** Walck. Sherwood Forest, both sexes, June 1912 (*Carr and Jackson*). Probably common, but not distinguished from the last species which it closely resembles.

THANATUS C. L. Koch.

- T. striatus** C. L. Koch. Sherwood Forest near Ollerton, July 1912 (*L. A. Carr*).

TIBELLUS Sim.

- T. oblongus** Walck. North Wheatley, an adult ♀ (*Chamberlin*). Sherwood Forest, both sexes. A very narrow and elongated spider, found amongst dry grass and sedges, etc.

SALTICIDAE.

The members of this Family are easily recognised by the quadrate form of the cephalothorax, and by the arrangement of the eyes in three rows, forming a large quadrangle. The anterior row consists of four large eyes, the two centrals beings especially large and usually iridescent; the two forming the intermediate row are minute, and the posterior two are of medium size and are set well back. These spiders spin no snare, but utilize their remarkable leaping powers for the capture of their prey.

SALTICUS Latr.

- S. scenicus** Clk. Rather common on walls and fences. Nottingham; Bulwell; Southwell; Newark; Sherwood Forest; Retford district; etc. This is the familiar 'jumping spider' so often seen walking and leaping on walls in the hot sunshine.
- S. cingulatus** Panz. Common. I have generally found it under bark on old palings and logs. Nottingham; Calver-

ton; Oxtou Bogs; Blidworth; Southwell; Langford Moor; Budby and Edwinstowe, Sherwood Forest; Worksop; etc.

HELIOPHANUS C. L. Koch.

H. flavipes C. L. Koch. Barrow Hills, Everton, 4. ix. 1903; Oxtou Bogs; Sherwood Forest near Edwinstowe, several by sweeping grass in June and August.

NEON Sim.

N. reticulatus Bl. Sherwood Forest near Edwinstowe, June and July 1912 (*Jackson and Carr*).

EUOPHRYS C. L. Koch.

E. frontalis Walek. Only found so far in the Sherwood Forest district: Warsop; Budby; Edwinstowe; Worksop; July to September.

SITTICUS Sim.

S. pubescens Fab. Sherwood Forest, Edwinstowe and Ollerton, June and July 1912 (*L. A. Carr*).

EVARCHA Sim.

E. falcata Bl. Wheatley and Rampton (*Chamberlin*). Langford Moor near Newark, beaten from *Calluna*; Wigsley Wood; Sherwood Forest near Edwinstowe.

AGELENIDAE.

Spiders with eight eyes placed in two more or less curved rows, those of the lateral pairs not being contiguous to each other. The legs are hairy and spinose, and three tarsal claws are present. They construct a large sheet-like web with a tubular retreat connected with it. *Argyroneta*, however, is aquatic, and quite different in its habits.

ARGYRONETA Latr.

A. aquatica Latr. Ditches near the Trent at Lenton; pool near Trent Bridge, Nottingham; Grantham canal, Nottingham. Probably common and widely distributed. This is the 'water-spider,' a large species which can swim and dive with ease, and constructs its silken dome-shaped nest beneath the surface of the water.

CRYPHOECA Thor.

- C. silvicola** C. L. Koch. Blidworth, on heather, 23. vi. 1904 ; Moorhaigh, Mansfield, 4. iv. 1905.

TETRILUS Sim.

- T. recisus** Camb. This species, under the name *Cryphoea recisa*, was founded upon two females taken by the late G. W. Chaster in Sherwood Forest, 12-13. vi. 1904, and sent by me to Rev. O. Pickard-Cambridge. In June 1912 Dr. Randell Jackson found it commonly under the bark of old oak trees in the Birklands and Bilhagh : he considers it to be conspecific with *T. arietinus* Thor.

AMAUROBIUS C. L. Koch.

- A. atropos** Walck. Pleasley Vale, under stones, 1. ix. 1903 ; Sherwood Forest near Edwinstowe.

TEGENARIA Latr.

- T. parietina** Fourc. Worksop, 1902.
- T. derhamii** Scop. Nottingham, in cellars and outhouses, common ; Bulcote ; Trowell. Also sent me from South Leverton (*Thornley*), and from Wheatley and Ranby near Retford (*Chamberlin*).

TEXTRIX Sund.

- T. denticulata** Oliv. Adults captured at Caythorpe near Lowdham, 12. vi. 1906. Taken by L. A. and J. W. Carr and Dr. Randell Jackson in Sherwood Forest near Edwinstowe in mid-June 1912.

HAHNIA C. L. Koch.

- H. helveola** Sim. Sherwood Forest, several ♀ ♀, June 12—17, 1912 (*A. R. Jackson, M.D.*).
- H. montana** Bl. Langford Moor, 3. iv. 1905. Both sexes taken in Sherwood Forest in 1912 by Dr. Jackson and L. A. Carr.

PISAURIDAE.

A difficult Family to define, its members being almost exactly intermediate in structure and habits between the Agelenidae

and the Lycosidae, and possessing no constant characters which separate them from those Families. They have eight eyes in three rows—four in the anterior row and two each in the others: these latter are much larger than those of the anterior row and are arranged in the form of a rectangle. There are three tarsal claws. *Pisaura mirabilis* is a very large spider with long and narrow body and long legs, occurring in most parts of the county on heaths and in woods, where the female may be seen about midsummer running over the herbage with its egg-sac attached beneath the cephalothorax. Later on a large and conspicuous roughly dome-shaped nest is constructed between the upright stems of grasses, twigs of heather, etc., and in this the egg-sac is enclosed and the young are hatched out.

PISAURA Sim.

P. mirabilis Clk. Kingston-upon-Soar; Langford Moor, common; Cotgrave Wolds, common; Wigsley Wood, nests and young common, as well as adult females, 16. vii. 1904; Sherwood Forest.

LYCOSIDAE.

Spiders with eight eyes arranged in three rows, very much as in the Pisauridae, and with three tarsal claws. Many species occur in woods, running freely over the ground in bright sunshine. The egg-sac is carried about attached to the spinners, and the young are also carried for a time after hatching crowded together upon the abdomen of the mother. Some species lurk under stones, and some of the larger make a burrow in the ground which they line with silk. No snare is constructed by members of this Family.

PIRATA Sund.

P. hygrophilus Thor. Annesley Park, 4. vii. 1903; Eakring Brail Wood, adults of both sexes among dead leaves, 6. vii. 1904; Roe Wood, Winkburn, among dead leaves in ditch; Sherwood Forest.

P. piraticus Clk. By the Trent, Radcliffe; Cinder Hill brick-yard; Oxtun Bogs.

TROCHOSA C. L. Koch.

T. ruricola De Geer. Common about Nottingham (*e.g.*, Daybrook, Wilford, Cinder Hill, Wollaton, &c.); Linby; Stapleford; about Retford and Worksop; etc.

T. terricola Thor. Wheatley and Laneham (*Chamberlin*). Quarry near Bulwell Wood Hall, 22. viii. 1903; Worksop, 19. ix. 1903; Langford Moor; Sherwood Forest.

T. perita Latr. A very handsome spider, found in dry sandy places. Barrow Hills near Everton, 4. ix. 1903 and subsequently; Rufford Forest, 11. vii. 1905; Worksop.

TARENTULA Sund.

T. barbipes Sund. Barrow Hills, Everton, 4. ix. 1903.

T. pulverulenta Clerck. Rather common. Quarry near Bulwell Wood Hall; Oxtun Bogs; Clipston Wolds; Eakring Brail Wood; Roe Wood, Winkburn; Langford Moor; Sherwood Forest near Edwinstowe; Worksop; Barrow Hills, Everton.

LYCOSA Latr.

L. amentata Clk. Abundant throughout the county, especially among dead leaves in woods, and exceedingly active.

L. nigriceps Thor. Rather common on sandy heaths: Blidworth; Langford Moor; Sherwood Forest near Edwinstowe and Ollerton.

L. farreni Camb. Sherwood Forest near Edwinstowe, two females of this rare species taken in June 1912 (*L. A. Carr*).

L. pullata Clk. Common throughout the county among grass and dead leaves, under stones, etc.

L. prativaga C. L. Koch. Edingley Hill near Southwell; Eakring Brail Wood; Oxtun Bogs; Sherwood Forest near Edwinstowe and Ollerton.

L. lugubris Walck. Common in woods: Ploughman Wood, Lowdham; Roe Wood, Winkburn; Eakring Brail Wood; Langford Moor; Sherwood Forest.

L. palustris L. Eakring Brail Wood; Sherwood Forest.

L. monticola C. L. Koch. Clipston Wolds; Sherwood Forest; Barrow Hills, Everton.

DICTYNIDAE.

Spiders with eight eyes in two transverse curved rows, those of each lateral pair being close together. There are three tarsal claws, and calamistrum and cribellum are present in all the species.

DICTYNA Sund.

- D. arundinacea** L. Langford Moor near Newark, common on heather; Budby, Sherwood Forest, common on rushes; Wigsley Wood, common on heather and rushes;—all in June and July 1904.
- D. uncinata** Westr. Wilford; Lambley; Budby, Ollerton and Edwinstowe, Sherwood Forest. Also taken by Rev. T. C. B. Chamberlin about Wheatley near Retford.
- D. pusilla** Westr. A ♂ was sent me by the late G. W. Chaster, who took it in Sherwood Forest, 12. vi. 1904.
- D. latens** Fab. Barrow Hills, Everton, 15. vi. 1904 (*Thornley*). Sherwood Forest near Edwinstowe, several of both sexes, 10—14. vi. 1912 (*L. A. Carr*).

LATHYS Sim.

- L. humilis** Bl. Sherwood Forest near Edwinstowe and Ollerton, not rare, June 1912 (*A. R. Jackson* and *L. A. Carr*). North Wheatley (*Chamberlin*). Langford Moor near Newark.

CINIFLO Bl.

- C. ferox** Walck. Barrow Hills, Everton; North Wheatley (*Chamberlin*). Worksop (*Houghton*). Nottingham; Sherwood Forest.

A very large, dark, and forbidding-looking spider, common in cellars and outbuildings, but occurring also under stones and logs far away from houses.

- C. similis** Bl. An abundant house-spider, occurring in cellars and outhouses, in crevices in walls, under boards, etc. The tubular snares are familiar objects in crevices of the sandstone rock in and about Nottingham, but it is also found in the open country, as at Budby and Edwinstowe, Sherwood Forest.

- C. fenestralis** Stroem. Abundant under loose bark on old palings, logs and trees; also occasionally under stones and the copings of walls.

MIMETIDAE.

Small spiders with eight eyes situated in two curved transverse adjacent rows, the four centrals forming a quadrangle. The legs are very spinose and there are three tarsal claws. The

falces are peculiar, somewhat resembling those of the Archaeidae (a family of spiders most of which are only known as fossils preserved in amber), and quite unlike anything in the Theridiidae or Argiopidae. The spinners on the other hand are similar to those of the Theridiidae and Argiopidae, and different from those of the Archaeidae which are very characteristic.

ERO C. L. Koch.

E. cambridgei Kulcz. Edwinstowe and Ollerton, Sherwood Forest, June and July 1912 (*L. A. Carr*).

E. furcata Vill. Sherwood Forest near Edwinstowe, 4. vii. and 16. viii.; Langford Moor near Newark, 19. viii.—all 1904.

THERIDIIDAE.

A large Family, including spiders mostly of small size, with relatively large, often nearly globular, abdomens. The eight eyes are situated in two curved transverse adjacent rows, the four centrals forming a quadrangle. Three tarsal claws are present. These spiders spin irregular webs and lead sedentary lives. They are distinguished from the members of the next Family by the structure of their falces, maxillae and sexual organs, especially the male palpi.

EPISINUS Walck.

E. angulatus Bl. Langford Moor near Newark, ♀, 14. vi. 1904.

THERIDION Walck.

T. lineatum Clk. Common and generally distributed in the county. A pretty spider of a pale yellow colour, often with two longitudinal carmine-coloured bands on the dorsal surface of the abdomen.

T. tepidariorum C. L. Koch. North Wheatley (*Chamberlin*). Trowell and Lowdham, October 1903. Found in green-houses and conservatories, where it is often very common.

T. formosum Clerck. Langford Moor, 30. vi. 1904; Sherwood Forest near Edwinstowe, ♂ ♀, June 1912.

T. riparium Bl. Gamston Covert near Retford, beaten from birch, 22. v. 1906.

T. sisypium Clerck. Common, and distributed throughout the county. A handsome spider, with the abdomen beauti-

fully variegated with reddish, brown, yellow and white markings.

- T. vittatum** C. L. Koch. Langford Moor, 14. vi.; Widmerpool, 19. vii.; Crown End Wood, West Leake, 15. viii.—1904; Sherwood Forest, both sexes common, July 1904 and June 1912.
- T. denticulatum** Walck. Common and widely distributed.
- T. simile** C. L. Koch. Langford Moor, beaten from heather, 14 and 30. vi. 1904.
- T. varians** Hahn. South Leverton; Barrow Hills, Everton (*Thornley*). Lambley, common on palings, 29. vi.; Langford Moor, beaten from heather, 14. vi.—1904; Budby and Edwinstowe, Sherwood Forest, July 1904 and June 1912, both sexes not uncommon.
- T. tinctum** Walck. Langford Moor, beaten from heather, June and August 1904. Both sexes taken in Sherwood Forest in June 1912 by Dr. Jackson and L. A. Carr.
- T. pictum** Hahn. South Leverton (*Thornley*). North Wheatley (*Chamberlin*). Budby, Sherwood Forest, 4. vii. 1904. A beautiful species: the abdomen has a central longitudinal band of a red colour, with a yellow border on either side of it.
- T. bimaculatum** L. Blidworth, 23. vi. 1904; Langford Moor, 30. vi. 1904; Budby, Boughton Breck, and near Edwinstowe, Sherwood Forest, both sexes rather common.
- T. pallens** Bl. Langford Moor, on heather; Epperstone Park; Wollaton; Roe Wood, Winkburn; Sherwood Forest near Edwinstowe; Wigsley Wood;—all the foregoing between June 14 and Aug. 8, 1904. Taken in Sherwood Forest in June 1912, commonly, by Dr. Jackson and L. A. Carr.

STEATODA Sund.

- S. bipunctata** L. South Leverton (*Thornley*). North Wheatley, etc., very common (*Chamberlin*). Nottingham, common in crevices and under copings of walls in gardens and on windows of outhouses, etc.; Sherwood Lodge, Arnold, and Lambley, common on palings; Sherwood Forest.

CRUSTULINA Menge.

- C. guttata** Wid. Langford Moor near Newark; Budby, Boughton Breck, and about Edwinstowe, Sherwood Forest; both sexes, June 10 to July 4.

ENOPLOGNATHA Pav.

- E. thoracica** Hahn. A ♀ under a heap of straw in stubble-field at Bagthorpe, Nottingham. 22. xii. 1903; another ♀ at Buddby, Sherwood Forest, 4. vii. 1904.

ROBERTUS Cambr.

- R. lividus** Bl. Nottingham; Daybrook; Linby; Burton Joyce; Langford Moor; Sherwood Forest near Edwinstowe and Ollerton.

ARGIOPIDAE.

This, as defined by Simon, is the dominant family in the Palaearctic region. In Britain it includes more than half of our native spiders, consisting as it does of Blackwall's Linyphiidae and Epeiridae combined. In our restricted fauna these seem very diverse to be associated in one family, but in other countries they are so connected by intermediate forms that, according to Simon, it is impossible to keep them separate. They are distinguished by certain peculiarities in the structure of the falcies and sexual organs, the most important of the last being the presence of an external branch on the palpal tarsus. The eight eyes are situated in two rows, the four centrals forming a quadrangle while the laterals are adjacent to one another. Many of our species are small black spiders popularly known as "money spinners"; these and their allies, the striped Linyphiae, spin horizontal sheet-like webs under which they hang back downwards. On the other hand, the beautiful geometrical webs which are such well-known objects are the work of the Epeirae and their allies.

LINYPHIINAE.**CERATINELLA** Emer.

- C. brevis** Wid. Sherwood Forest, ♀, June 1912 (*Jackson*).
C. brevipes Westr. Langford Moor near Newark, 3. iv. 1905.

CNEPHALOCOTES Sim.

- C. obscurus** Bl. Sherwood Forest, ♂, 14. vi. 1904.

TISO Sim.

- T. vagans** Bl. Sherwood Forest, ♂ ♂, 14. vi. 1904.

TROXOCHRUS Sim.

T. hiemalis Bl. Clifton Grove, one ♂ in moss, April 1906.

BARYPHYMA Sim.

B. pratensis Bl. Wilford, 6. iv. 1903.

DIPLOCEPHALUS Bertk.

D. cristatus Bl. Colwick Wood, an adult ♀ in moss, 15. iii. 1906.

D. latifrons Camb. Colwick Wood, both sexes in moss, 15. iii. 1906; Clifton Grove, in moss, April 1906. Both sexes taken by Dr. Jackson in Sherwood Forest in June 1912.

D. picinus Bl. Both sexes taken in Sherwood Forest by Dr. Jackson, June 1912.

D. beckii Camb. Sherwood Forest, ♀ ♀, June 1912 (*Jackson*).

D. fuscipes Bl. Langford Moor, 3. iv. 1905; Clifton Grove, both sexes in moss, April 1906. Also taken by Dr. Jackson in Sherwood Forest in June 1912.

DICYMBIUM Menge.

D. nigrum Bl. Sherwood Forest, ♂, 12. vi. 1904 (*Chaster*).
Wheatley near Retford (*Chamberlin*).

TAPINOCYBA Sim.

T. praecox Camb. Langford Moor near Newark, 24. iv. 1905.

LOPHOMMA Menge.

L. herbigradum Bl. Sherwood Forest, ♂, 14. vi. 1904;
Clifton Grove, both sexes in moss, April 1906.

POCADICNEMIS Sim.

P. pumila Bl. Sherwood Forest near Edwinstowe, June and July.

PEPONOCRANIUM Sim.

P. ludicrum Camb. Common on heather: Langford Moor, 14. vi.; Blidworth, 23. vi.—1904; Sherwood Forest near Edwinstowe.

METOPOBACTRUS Sim.

- M. prominulus** Camb. Sherwood Forest, ♂, 12. vi. 1904.
Taken in same locality in June 1912 by Dr. Jackson.

MINYRIOLUS Sim.

- M. pusillus** Wid. Both sexes of this very minute spider were taken by Dr. Jackson in Sherwood Forest in June 1912.

STYLOCTETOR Sim.

- S. penicillatus** Westr. Sherwood Forest, one ♀, June 1912
(*Jackson*).

ENTELECARA Sim.

- E. acuminata** Wid. Langford Moor, 30. vi.; Sherwood Forest near Edwinstowe, 4. vii.—1904. Taken also in latter locality by Dr. Jackson in June 1912.

- E. erythropus** Westr. Colwick Park near Nottingham, 11. vi. 1904; Cossall, 16. v. 1905; Sherwood Forest near Edwinstowe.

WIDERIA Sim.

- W. cucullata** C. L. Koch. Sherwood Forest, June 1912
(*Jackson*).

- W. antica** Wid. Langford Moor near Newark, beaten from heather, 14. vi. 1904.

- W. fugax** Camb. Sherwood Forest, ♂, 13. vi. 1904 (*Chaster*).

WALCKENAERA Bl.

- W. acuminata** Bl. Bagthorpe, Nottingham; near Broxtowe Hall, Basford; Cossall; Linby; Sherwood Forest. Mostly females, captured in the spring.

- W. nudipalpis** Westr. Clifton Grove, a ♀ in moss, April 1906.

CORNICULARIA Menge.

- C. cuspidata** Bl. Rampton, by the Trent, 1906 (*Chamberlin*).

- C. unicornis** Camb. Rampton, by the Trent (*Chamberlin*).
Sherwood Forest, June 1912 (*L. A. Carr*).

NERIENE Bl.

N. rubens Bl. North Wheatley; Trent-side, Rampton (*Chamberlin*). Oxtun Bogs, both sexes common, 21. ix. 1904; Langford Moor; Sherwood Forest near Edwinstowe.

N. rubella Bl. Epperstone Park; Linby; Crown End Wood, West Leake.

ENIDIA F. P. Smith (*Dicyphus* Menge).

E. cornuta Bl. North Wheatley (*Chamberlin*). Sherwood Forest, adults of both sexes on several occasions in June; Langford Moor, beaten from trees, 30. vi. 1904.

E. bituberculata Wid. Laneham (*Chamberlin*). Wilford, 6. iv. 1903; Oxtun Bogs, under bark, 1. v. 1904.

DISMODICUS Sim.

D. bifrons Bl. Sherwood Forest near Edwinstowe, in June and early July.

GONGYLIDIUM Menge.

G. rufipes Sund. South Leverton (*Thornley*). Beauvale Woods; Widmerpool; Roe Wood, Winkburn; Eakring Brail Wood; Sherwood Forest near Edwinstowe; Wigsley Wood.

OEDOTHORAX Bertk.

Oe. fuscum Bl. Bagthorpe, Nottingham, 26. xi. 1903; Wigsley Wood, 16. vii. 1904.

Oe. apicatum Bl. Southwell (*F. O. Pickard-Cambridge*).

Oe. tuberosum Bl. Oxtun Bogs, ♂, 21. ix. 1904.

ERIGONE Andouin.

E. dentipalpis Wid. Nottingham; Trowell; Widmerpool; Sherwood Forest near Ollerton.

E. atra Bl. Bagthorpe, Nottingham; Langford Moor; Sherwood Forest near Edwinstowe; Rampton near Retford.

MASO Sim.

M. sundevallii Westr. Sherwood Forest near Edwinstowe, ♂ ♀, 4. vii. 1904. Both sexes taken in same locality in June 1912 by Dr. Jackson and L. A. Carr.

LEPTORHOPTRUM Kulez.

- L. huthwaitii** Camb. Under stones by the Trent at Rampton (*Chamberlin*).

MACRARGUS Dahl.

- M. rufus** Wid. Bagthorpe, Nottingham; Langford Moor; Sherwood Forest near Edwinstowe.

OREONETIDES Strand.

- O. abnormis** Bl. Wollaton; Langford Moor; Sherwood Forest.

RHABDORIA Hull.

- R. diluta** Camb. Langford Moor near Newark, 3. iv. 1905.

CENTROMERUS Dahl.

- C. bicolor** Bl. Bagthorpe, Nottingham, common, 26. xi. 1903; Arnold; Sutton near Granby; Worksop, 19. ix. 1903.

SYEDRA Sim.

- S. innotabilis** Camb. Both sexes on the bark of firs in Sherwood Forest, June 1912 (*Jackson*).

MICRONETA Menge.

- M. viaria** Bl. Sherwood Forest, ♀ ♀, June 12—17, 1912 (*Jackson*).

AGYNETA Hull.

- A. conigera** Camb. Sherwood Forest near Edwinstowe, June 10—17, 1912 (*Dr. Jackson* and *L. A. Carr*).
A. subtilis Camb. Sherwood Forest, ♀, June 1912 (*Jackson*).

MICRYPHANTES C. L. Koch.

- M. rurestris** C. L. Koch. Widmerpool, beaten from trees, 19. vii. 1904; Cossall, ♂, 15. v. 1905; Linby, an adult ♀, 5. iv. 1906.
M. saxatilis Bl. Sherwood Forest near Edwinstowe, June and July 1904.

BATHYPHANTES Menge.

- B. concolor** Wid. In many places about Nottingham (Bagthorpe, Colwick Wood, Arnold, Wollaton, Strelley, Cossall, Linby, etc.); Worksop; Rampton. Usually found under stones.
- B. nigrinus** Westr. Wilford; Oxtun Bogs; Beauvale Woods; Sherwood Forest near Edwinstowe.
- B. pullatus** Camb. Eakring Brail Wood, 1. v. 1904; Oxtun Bogs, 23. vi. 1904; Sherwood Forest near Edwinstowe.
- B. parvulus** Westr. Sherwood Forest, ♀, 12. vi. 1904 (*Chaster*).
- B. gracilis** Bl. Bagthorpe, Nottingham; Widmerpool.
- B. dorsalis** Wid. Budby and Edwinstowe. Sherwood Forest; Cotgrave Wolds. Also taken at Wheatley (*Chamberlin*).

POECILONETA Kulcz.

- P. globosa** Wid. Bulwell Forest; Blidworth, beaten from heather; Epperstone Park; Langford Moor, on heather; Budby and Edwinstowe, Sherwood Forest.

LEPTYPHANTES Menge.

- L. minutus** Bl. Nottingham, 6. ix.—24. xi. 1903; Bulcote; Trowell; under bark on old palings at Sherwood Lodge, Arnold, 23. vi. 1904; Rowhoe Wood, Widmerpool; etc. Also taken at Ranby near Retford (*Chamberlin*).
- L. nebulosus** Sund. Nottingham, in cellar of house, 23. xii. 1902; Bagthorpe, 24. xi. 1903; Sherwood Forest, June 1912.
- L. leprosus** Ohl. Nottingham, in cellar; Bulcote, Nov. 1903.
- L. terricola** C. L. Koch. Sherwood Forest near Edwinstowe, ♂, June 1912 (*L. A. Carr*).
- L. zimmermannii** Bertk. North Wheatley (*Chamberlin*). Quarry Banks, Linby, ♂ ♀; Sherwood Forest near Edwinstowe, both sexes rather common under bark of old trees.
- L. obscurus** Bl. Epperstone Park; Blidworth; Eakring Brail Wood; Sherwood Forest (Budby, Edwinstowe, etc.) rather common.
- L. pallidus** Camb. Southwell (*F. O. Pickard-Cambridge*).

- L. flavipes** Bl. Langford Moor, 14. vi. 1904, beaten from heather.
- L. tenuis** Bl. North Wheatley (*Chamberlin*). Nottingham; Wilford; Wollaton; Cossall; Trowell; Widmerpool; Sherwood Forest near Edwinstowe.
- L. mengii** Kulcz. (?) Sherwood Forest near Edwinstowe, July 1912.
- L. tenebricola** Wid. Sherwood Forest, two ♂♂, 12—17. vi. 1912 (*Jackson*).
- L. carrii** Jacks. Founded upon a ♂ captured by Dr. Randall Jackson in Sherwood Forest near Edwinstowe, June 1912. Figured and described in *Trans. Nottm. Naturalists' Soc.* for 1911—12, p. 25, Pl. I., figs. 1—4 (1913).

LABULLA Sim.

- L. thoracica** Wid. North Wheatley (*Chamberlin*). Lambley, on palings, 29. vi. 1904; Bulcote; Sherwood Forest near Ollerton.

LINYPHIA Latr.

- L. insignis** Bl. Rowhoe Wood and elsewhere about Widmerpool; Beauvale Woods; West Leake Hills; Oxtan Bogs; Roe Wood, Winkburn; Wigsley Wood;—all July to Sept. 1904; Sherwood Forest, June 1912.
- L. montana** Clerck. Not uncommon, and widely distributed in the county.
- L. triangularis** Clerck. Abundant throughout the county.
- L. peltata** Wid. Common on various shrubs and trees in woods at Epperstone, Beauvale, Widmerpool, Owthorpe, Cotgrave, Eakring, Winkburn, and Sherwood Forest.
- L. pusilla** Sund. Beaten from heather in June 1904 at Blidworth, Langford Moor, and Sherwood Forest. Also sent me from North Wheatley by Rev. T. C. B. Chamberlin.
- L. hortensis** Sund. Taken in July at Sherwood Forest near Edwinstowe and Ollerton, and at Eaton Wood near Retford; also at Widmerpool.
- L. clathrata** Sund. Daybrook, Nottingham; Linby; Eakring Brail Wood; Southwell; Roe Wood, Winkburn; Langford Moor, common on heather, June 1904; Sherwood Forest near Edwinstowe. Also taken at Wheatley (*Chamberlin*).

STEMONYPHANTES Menge.

- S. lineata** L. Bagthorpe, Nottingham, not uncommon, 24—26. xi. 1903 and 10. iii. 1904; Daybrook and Arnold, March and April 1904; Kimberley; Clipston Wolds, 19. vii. 1904; Sherwood Forest near Edwinstowe and Ollerton, June 1904 and June and July 1912.

BOLYPHANTES Menge.

- B. bucculentus** Clerck. Oxton Bogs, 21. ix. 1904. Thorney, Aug. 1913 (*L. A. Carr*).
- B. alticeps** Sund. Pleasley Vale, 1. ix. 1903; Sherwood Forest near Edwinstowe, July 1912.
- B. luteolus** Bl. Sherwood Forest near Edwinstowe, several specimens, 16. viii. 1904.

DRAPETISCA Menge.

- D. socialis** Sund. Barrow Hills, Everton, 4. ix. 1903; Epperstone Park, 28. vi.; Widmerpool, 2. viii.; Crown End Wood, West Leake, rather common, 16. viii.; Langford Moor, 19. viii.—all 1904; Sherwood Forest near Edwinstowe, rather common, 4. vii.—15. viii. 1904 and June 1912.

TAPINOPA Westr.

- T. longidens** Wid. Sherwood Forest near Edwinstowe, July 1912 (*L. A. Carr*).

TETRAGNATHINAE.

PACHYGNATHA Sund.

- P. degeerii** Sund. Common about Nottingham, *e.g.*, Bagthorpe, Daybrook, Arnold, Wilford, Wollaton, etc.; Oxton Bogs; Linby; Sherwood Forest near Edwinstowe, common; Laneham.
- P. clerckii** Sund. Rampton; Laneham; North Wheatley (*Chamberlin*). Bagthorpe, Nottingham, common under heaps of straw in stubble-field, in winter and spring; Wilford; Radcliffe-on-Trent; Oxton Bogs; Langford Moor; Sherwood Forest; Worksop. Common in adult state throughout the year.
- P. listeri** Sund. Eakring Brail Wood, in grassy drives, 1. v. 1904.

TETRAGNATHA Latr.

- T. extensa** L. Annesley Park, 4. vii. 1903; Budby Carr, Sherwood Forest, 4. vii. 1904.
- T. solandrii** Scop. North Wheatley (*Chamberlin*). Wollaton, on reeds by canal side; on palings at Lambley; on trees, Epperstone Park; Wigsley Wood on *Unicus palustris*; all in June and July.
- T. obtusa** C. L. Koch. Langford Moor near Newark; Cotgrave Wolds; Sherwood Forest near Edwinstowe, several of both sexes. Beaten from various trees, June to August.

META C. L. Koch.

- M. segmentata** Clerck. A very abundant spider everywhere in the county.
- M. merianae** Scop. Nottingham, in garden; Langford Moor near Newark, common in overhanging bank of ditch.

NESTICUS Thor.

- N. cellulanus** Clerck. North Wheatley (*Chamberlin*). Nottingham, in cellar of house, 28. xii. 1902.

ARGIOPINAE.

CYCLOSA Menge.

- C. conica** Pall. North Wheatley (*Chamberlin*). Langford Moor, on heather, 30. vi. and 19. viii. 1904; Eaton Wood near Retford, 11. vii. 1906; Sherwood Forest near Edwinstowe, both sexes, June 1912.

SINGA C. L. Koch.

- S. albovittata** Westr. Sherwood Forest near Edwinstowe, by sweeping grass, etc., 16. viii. 1904.

ZILLA C. L. Koch.

- Z. x-notata** Clerck. A very common spider: found throughout the county under cross-bars of gates and palings, under the copings of walls, in greenhouses and out-buildings, etc.
- Z. atrica** C. L. Koch. South Leverton (*Thornley*). Nottingham; Widmerpool; Oxtun Bogs; Winkburn; July to November.

EPEIRA Walck.

- E. gibbosa** Walck. Crown End Wood, West Leake; Langford Moor near Newark, on heather on several occasions; Sherwood Forest; Worksop. A scarce species, known by the two angular tubercles on the front of the abdomen.
- E. pyramidata** Clerck. Shireoaks (*Houghton*). North Wheatley (*Chamberlin*). West Leake Hills, 22. ix. 1910.
- E. diademata** Clerck. Common in gardens, woods, etc., in all parts of the county. One of our largest and most familiar spiders.
- E. cucurbitina** Clerck. This beautiful spider is common on oak trees and heather at Langford Moor and in Sherwood Forest; also taken in Gamston Covert and other places near Retford. Easily recognised by its reddish cephalothorax and legs, and bright apple-green abdomen with a red blotch at its hinder extremity.
- E. sturmii** Hahn. Sherwood Forest, both sexes, June 1912 (*Carr and Jackson*); Langford Moor, many specimens beaten from heather, June to August 1904; Roe Wood, Winkburn, 8. viii. 1904.
- E. umbratica** Clerck. Common, and distributed throughout the county, occurring under bark on old palings, in the crevices of wooden fences, etc. Easily known by its large size, flat oval abdomen, and very dark brown colour with paler markings, and two large yellowish-white spots on the underside of the abdomen.
- E. quadrata** Clerck. Barrow Hills, Everton, 4. ix.; Bulwell Forest, 6. ix.—1903. Taken in Sherwood Forest in June 1912 by Dr. Jackson. A very large and handsome spider, forming its large orbicular snare chiefly in furze bushes on commons.
- E. sclopetaria** Clerck. Lowdham, abundant in greenhouses, 29. x. 1903; Colwick Park, under bark of old fence-rail, 11. vi. 1904.
- E. cornuta** Clerck. Colwick; Sherwood Forest near Edwinstowe; Barrow Hills, Everton.
- E. patagiata** C. L. Koch. Colwick; riverside at Newark; Barrow Hills, Everton.

OPILIONES (Harvestmen).

In the Opiliones the body is not divided into separate regions, the abdomen being joined to the cephalothorax along its whole breadth instead of being connected with it by a narrow pedicle as in spiders. The abdomen however is segmented, which is not the case in spiders. The eight legs are very long, slender and brittle; there are no spinning organs; the simple eyes are only two in number. Harvestmen are carnivorous, feeding upon the larvae of insects, the young of other arachnids, etc. There is no metamorphosis, the newly-hatched young resembling the parents in all but size and colour. Of the twenty British species I have taken fourteen in Nottinghamshire. All were determined by the Rev. O. Pickard-Cambridge, F.R.S.

*PHALANGIIDAE.***LIQBUNUM** C. Koch.

L. rotundum Latr. Langford Moor near Newark, rather common among heather; Roe Wood, Winkburn; Rempstone.

L. blackwallii Meade. North Wheatley (*Chamberlin*). Cotgrave Wolds, on trees, 19. vii. 1904.

PHALANGIUM L.

P. opilio L. Abundant on trees, heather and herbage. Quarry near Bulwell Wood Hall; Blidworth; Mansfield; Cotgrave; Widmerpool; Langford Moor; Wigsley Wood; Barrow Hills, Everton, etc.

P. parietinum De G. Common on walls and in outhouses in Nottingham in late summer. Found also in the open country, as at Cotgrave Wolds, Beauvale Woods, Warsop, Budby, North Wheatley, etc.

P. saxatile C. L. Koch. Mansfield, 11. viii. 1903; Barrow Hills, Everton, 4. ix. 1903.

PLATYBUNUS C. L. Koch.

P. corniger Herm. Wilford Hill, under bits of bark on ground; Sherwood Forest near Edwinstowe.

MEGABUNUS Meade.

M. insignis Meade. Linby, 21. v. 1903; Langford Moor, 14. vi. 1904.

MITOPUS Thor.

M morio Fab. Cotgrave Wolds; Roe Wood, Winkburn; Clumber Park; North Wheatley. Not uncommon on trees and herbage.

OLIGOLOPHUS C. Koch.

O. agrestis Meade. Grives Wood, Kirkby-in-Ashfield; Nether Langwith; Crown End Wood, West Leake; Roe Wood, Winkburn; all in August. Also sent me by Mr. Chamberlin from Ranby near Babworth.

O. tridens C. L. Koch. North Wheatley (*Chamberlin*). Grives Wood, Kirkby; Nether Langwith; Warsop; Worksop; Beauvale Woods. August to October.

O. palpinalis Herbst. Crown End Wood, West Leake, 15. viii. 1904.

O. hansenii Kraep. Under rotten logs in field at Bagthorpe, Nottingham, rather common, 19—24. xi. 1903; three specimens under heap of straw in same locality, 26. xi. 1903; Daybrook, October 1903; Wollaton, under log in timber yard, 9. i. 1904.

NEMASTOMATIDAE.**NEMASTOMA** C. Koch.

N. lugubre O. F. Müll. Fairly common about Nottingham, under stones and logs, etc., *e.g.*, at Bagthorpe, Daybrook, Arnold, etc.; Linby; Beauvale Woods; Oxtun Bogs; Worksop; Sherwood Forest.

N. chrysomelas Herm. Worksop, 19. ix. 1903.

CHERNETIDEA or **PSEUDOSCORPIONES**
(*False-Scorpions*).

The Chernetidea are minute arachnids occurring amongst moss and dead leaves or under stones, bark, etc.; they are easily recognized by their peculiar palpi, which are very large and terminate in pincers or forceps. They thus resemble minute scorpions except that they have no tail. Some are eyeless, others have two or four simple eyes. They feed upon small insects and

larvae. About twenty species are British, but only seven have as yet been found in Notts. I am indebted to the Rev. O. Pickard-Cambridge and Mr. H. Wallis Kew for the determination of the species.

CHELIFERIDAE.

CHERNES Menge.

- C. nodosus** Schr. Two specimens clinging to legs of house fly at Worksop, 10. ix. 1903 (*Houghton*).
- C. wideri** C. L. Koch. Taken by Mr. H. Wallis Kew in Sherwood Forest under bark of old oak trees in October 1906.
- C. cyrneus** L. Koch. Taken by Mr. Kew in the Birklands and Bilhagh, Sherwood Forest, under rather close-fitting bark of dead or partly dead oak trees, October 1906. Also taken by Dr. Randell Jackson in the same locality in June 1912. (For a full description and figure of this species see *Trans. Nottingham Naturalists' Soc.* for 1905-6, pp. 41-6).
- C. cimicoides** Fab. Near Trent Bridge, Nottingham (*W. F. Ryles*). Colwick Wood, in moss, 15. iii. 1906 (*Carr*). The Birklands, Sherwood Forest, under bark of old oaks, Oct. 1906 (*Kew*).

OBISIIDAE.

OBISIUM Leach.

- O. muscorum** Leach. In moss, probably from Bramcote (*Ryles*). Sherwood Forest near Edwinstowe, July 1912.

CHTHONIIDAE.

CHTHONIUS C. L. Koch.

- C. rayi** L. Koch. North Wheatley; abundant under stones by side of River Trent at Rampton, May 1906 (*Chamberlin*). Common under stones in old quarries throughout the Magnesian Limestone district: *e.g.*, near Bulwell Wood Hall, Aug. 22.; Mansfield, Aug. 11.; Mansfield Woodhouse, Sept. 1.; Pleasley Vale, Sept. 1.; Creswell Crags Quarry, Aug. 4.; Worksop, Sept. 19.—all 1903; in moss from Colwick Wood, 15. iii. 1906 (*Carr*). Mapperley, Nottingham, ♂ ♀, under slates in greenhouse, Oct. 1914 (*Thornley*).

C. tetrachelatus Preys. Under stones in quarries in the Magnesian Limestone: near Bulwell Wood Hall, Aug. 22.; Grives Wood, Kirkby-in-Ashfield, Aug. 21.; Mansfield Woodhouse, Sept. 1.—1903.

ACARINA (Mites).

The Acarina agree with the Opiliones inasmuch as the body is not divided into separate regions; the abdomen is broadly fused with the cephalothorax, but is unsegmented. They are mostly minute, differ greatly in habit and mode of life, and undergo a distinct metamorphosis.

This Order of Arachnids is as yet practically untouched in Nottinghamshire and offers a wide and interesting field for investigation. Many species are parasitic on plants and animals and are therefore of considerable economic importance. Thus, *Tetranychus telarius*, the common 'red spider' of our gardens, infests fruit trees and other plants, and the 'black-currant mite' (*Eriophyes ribis*) destroys black-currant bushes. Many species attack wild and domesticated animals as well as man. *Dermanyssus avium* is a common and troublesome parasite of cage-birds; *Gamasus coleoptratorum* infests the beetle *Geotrupes*; *Atax bonzi* is parasitic upon freshwater mussels. A great many species, especially those belonging to the Family Oribatidae (beetle-mites) occur amongst moss, dead leaves, etc.; many others inhabit fresh water, and a few are marine.

Some species associate with ants, and Mr. Donisthorpe found three species—*Antennophorus grandis* Berl., *Trachyuropoda excavata* Wasm. (new to Britain), and *Urodiscella ricasoliana* Berl.—in nests of *Lasius fuliginosus* in Sherwood Forest, in June 1907.

The members of the Family Eriophyidae form galls on various plants, and a number of these have been found in Nottinghamshire. A list of the species recorded is appended.

ERIOPHYIDAE.

ERIOPHYES Sieb.

E. nalepai Fock. Galls on leaves of alder. Shireoaks Park near Worksop, 2. vii. 1904 (*Thornley*). Bulwell Forest, 2. viii. 1912; Oxtan Bogs, 14. vii. 1915.

E. laevis Nal. Galls on alder. Shireoaks Park near Worksop, 2. vii. 1904 (*Thornley*).

- E. avellanae** Nal. Galls on leaves of hazel. Shireoaks Park near Worksop, 2. vii. 1904; Manton Wood near Worksop, abundant, 14. vi.; East Park Wood, Laxton, 15. vi.—1906 (*Thornley*).
- E. tristriatus** Nal., var. *erinea* Nal. Galls common on walnut in Kingston Park, 5 viii. 1909 (*Thornley*).
- E. tetanothrix** Nal. East Park Wood, Laxton, 15. vi. 1906 (*Thornley*).
- E. tiliae** Pgst. Galls on lime, Shireoaks Park, 2. vii. 1904—the form *typicus* Pgst. (*Thornley*).
- E. ribis** Nal. The ‘black-currant mite,’ a pest in gardens at Nottingham and other places in the county.
- E. similis** Nal. Galls on leaves of *Prunus spinosa*. Gotham, 30. vii. 1904 (*Thornley*).
- E. fraxini** Karp. Galls on ash. Kingston-upon-Soar, 23. vii.; West Leake, 21. viii.—1908 (*Thornley*).
- E. galii** Karp. Galls on *Galium aparine*. Seen occasionally in the county but no records kept.

PHYLLOCOPTES Nal.

- P. acericola** Nal. Galls on sycamore. Manton Wood near Worksop, 14. vi. 1906; Kingston-upon-Soar, 18. viii.; Clifton, 12. ix.—1908 (*Thornley*). Aspley Woods; Radcliffe-on-Trent; Southwell;—all in June 1912.
- P. fraxini** Nal. Galls on ash. East Park Wood, Laxton, 15. vi. 1906; Kingston-upon-Soar, 23. vii.; West Leake, 21. viii.—1908 (*Thornley*).

SUMMARY OF THE SPECIES RECORDED IN THE FOREGOING PAGES.

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Entomostraca	14	25
Myriapoda—Chilopoda	10	
Diplopoda	14	24
Hexapoda—Thysanura	4	
Collembola	29	
Dermaptera	2	
Orthoptera	20	
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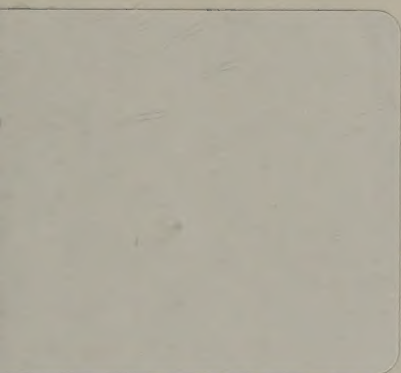
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